OLD MONTPELIER DUMP
ROUTE 12-ELM STREET
MONTPELIER, VERMONT

SCREENING SITE INSPECTION
POTENTIAL HAZARDOUS WASTE SITE
VTD#988366613

January 17, 1992

SITES MANAGEMENT SECTION
HAZARDOUS MATERIALS MANAGEMENT DIVISION
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
VERMONT AGENCY OF NATURAL RESOURCES

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I. INTRODUCTION

The Hazardous Materials Management Division(HMMD), Department of Environmental Conservation(DEC), Vermont Agency of Natural Resources(ANR) has completed a Site Inspection(SI) report on the Old Montpelier Stump Dump located off Route 12 in Montpelier, Vermont. The SI was undertaken in response to a Preliminary Assessment (PA) completed by the DEC in August of 1990 which recommended that an SI be performed. The SI was completed based on information from review of state and local government files, interviews with knowledgeable parties, and from site visits and sample results.

This report complies with the requirements of the Comprehensive Environmental Response, Compensation and Liability Act(CERCLA) of 1980, as amended, commonly known as Superfund. Site Inspections are intended to provide a preliminary screening of sites and to facilitate EPA's assignment of site priorities as well as to gather basic information regarding the potential hazard posed by a site. They are limited efforts and are not intended to substitute for more detailed investigations.

The Old Montpelier Stump Dump, owned and operated by the City of Montpelier, is located on Dump Road at 44 22' 20.06" north latitude and 72 26'32.24" west longitude (Map 1). It is situated in a rural area with the North Branch river flowing .25 miles to the east. The Old Montpelier Stump Dump was formerly the old city landfill used for the disposal of domestic waste. As of 1990, it consisted of a storage yard for the town road crew equipment, disposal area for stumps and clean lumber, stockpiled petroleum contaminated soils and pavement chips from road construction and repair.

An SI is being completed on this site because of the past disposal of stormwater line debris and granite sludge into lagoons/pits located onsite. This site was referred to the HMMD from the DEC-Water Quality Division due to potential impact on the small stream that flows through the dump.

II. SITE HISTORY

The site of the Old Montpelier Stump Dump was originally divided into three separate residential lots. The city of Montpelier purchased the three lots, totaling 22 acres, between the years 1897-1958 (Map 2). In April of 1897, the City of Montpelier purchased the Estate of Fannie M. Burnham which is an adjoining tract of land comprising 13.75 acres, and on January 10, 1958, purchased the land of A. Charles Fernandez and John J. Staab. The land of Fernandez and Staab is referred to as a landfill. The Poor Farm lands run on the easterly and westerly sides of Upper Elm Street and are part of the current city dump/landfill property.

The site was first used as a dump/sanitary landfill by the city of Montpelier somewhere between 1931-1958. Household refuse, construction debris, stumps and brush were accepted for disposal. In the early 1960's the disposal of household refuse ceased. The city allowed Montpelier residents to continue disposing stumps, brush and construction debris(1b).

In 1971, the City of Montpelier felt they should obtain a Land Use Permit to reopen the Old City Dump. This is possibly due to the dumping restrictions at the Inland Inc. Sanitary Landfill in East Montpelier which created a need for a disposal area for construction debris, stumps and brush. Inland Inc., was accused by the Montpelier Aldermen of breaking a three year contract with the City, by refusing some persons, mainly tree cutters, of their dumping privileges(1b).

In January of 1973, the City applied for a Land Use Permit to expand the dumping area from one to three acres, and to relocate a small stream which runs through the dump. On March 23, 1973, the permit was granted from the District Environmental Commission#5 with an expiration date of June 15, 1978, at which time all construction was to be completed unless an extension was obtained under Title 10 V.S.A., SS 6091. On February 05, 1979, the City applied for an amendment to the Land Use Permit for continued use of the stump dump which was approved by District#5. The current land use permit #5W0117 expires in 1999, and any changes to the land requires an amendment to the permit for review by the District Environmental Commission(1b).

On October 17, 1988, the VT DEC, Water Quality Division(WQD), conducted a survey of the macroinvertebrate community in a tributary stream of the North Branch of the Winooski River to determine if the Montpelier Dump was adversely impacting the stream. The stream which flows through the dump was sampled approximately 50 meters above the northwest corner of the dump and below the dump at the entrance near Route 12. This survey showed the macroinvertebrate community between the two sampling sites decreased by 50 percent. The WQD determined the decreases in density and numbers of species of aquatic macroinvertebrates below the dump compared to above is probably due to toxicity from the leachate, and from surface runoff causing high silt in the stream(1b).

On June 07, 1989, five underground storage tanks were removed from the Public Works Department on School Street. During the tank pull, the degree of soil contamination measured 100-150 parts per million(ppm) on a portable gas analyzer (Hnu) which is used to measure a wide variety of organic vapors(1b,c). The contaminated soils(90-110 yards) were removed offsite and disposed of at the Old Montpelier Stump Dump. These soils were seeded with grass seed and covered with plastic to undergo biodegradation of the petroleum contaminants. These soils are located at the far end of the stump dump(Map 3), and fenced off from people and large animals. However, the soils are still easily accessible. On December 01, 1989, the City of Montpelier, Department of Public Works, applied to the VT ANR, Solid Waste Management Division, for "Categorical Certification" regarding the disposal of 1500 cubic yards per year of concrete. The qualifications are stated in 10 V.S.A., Chapter 159, Section 6-309 of the Solid Waste Management Regulations. The application for Categorical Certification was denied under Section 6-309 of the Solid Waste Management Rules due to the location of the disposal area(s) within 300' from the adjoining property. The Solid Waste Management Division delineated an area of the dump that could be certifiable(Map 2). The Solid Waste Division explained to the City of Montpelier they could apply for an "Interim Certification" as a Solid Waste Management facility, in accordance with sections 6-306 and 6-304 of the Solid Waste Management Rules(1b). However, the City of Montpelier has not applied for this Interim Certification(2). An Interim Certification can be granted if a site does not qualify for a solid waste management certification under the statutory or regulatory requirements(1b).

Currently, the Stump Dump is open to Montpelier residents for the disposal of clean lumber, brush and stumps. To ensure a clean load, city officials inspect the load, and if the load passes inspection, the resident is given the key to access the dump. The City of Montpelier also allows the dump to be used for the disposal of granite sludge generated by the local granite sheds. The sludge is dewatered prior to being disposed of into a number of 10' by 50' by 4' pits(at a maximum). There are a total of six pits on site(Map 4). Three of the pits have been filled with granite sludge, dried and covered over with dirt; two pits are still in use and the other is filled and in drying out phase. This disposal has occurred since the late 1970's. Approximately 30-35 cubic yards are disposed per year, usually in July when the granite sheds are cleaned. Over the years, the amount of sludge disposal has decreased due to the local granite sheds finding other alternatives for disposal and the decreased amount of sludge generated. In 1989, the dump accepted granite sludge from one granite shed (1b).

Granite sludge Pits #1 and #2 are fenced off on three sides with a dirt mound on the fourth side. Pit #1 is full and dry and Pit #2 is full with granite sludge. Pit #3 is fenced off on all four sides and is still in use for the disposal of granite sludge and storm water line debris which includes grit, sand and sewage. The sewage is encountered due to the fact that several of the

city's storm water lines are in combination with the sewer lines(1b).

In 1990 the dump also served as an outside storage area for the City of Montpelier, Public Works Department, who used it to store culverts, snow plows, sand and sand barrels, tires, old street signs, and pavement chips. The stockpiled pavement chips were from the Interstate 89 bridge in Montpelier. The pavement chips were crushed, graded, and reused as base material in the construction of new roads(1b).

On November 7, 1990, the DEC, HMMD, conducted the Site Investigation (SI) by collecting soil, surface and groundwater samples at various locations at the dump. Soil samples were collected from the sludge pits, petroleum contaminated soils, and from a background location on the southeasterly portion of the property. Surface water samples were collected from upstream and downstream locations of the dump, and groundwater samples were collected from two seeps(1d)(Map 4).

III. ENVIRONMENTAL SETTING

The City of Montpelier is located in Washington County in the north central part of the state. It comprises 5,440 acres and is inhabited by 8,119 residents. Montpelier is bounded by the towns of Middlesex to the north and northwest, East Montpelier to the east and Berlin to the south and southwest(Map 5).

Currently, there are four known public community water supplies whose source is groundwater, located within a four mile radius. Two are located in East Montpelier which include the Crystal Spring Water Coop located approximately three miles to the east of the site and supplied by three springs and a gravel well which serve 300 people; and East View Water System located approximately three miles to the southeast which is supplied by one bedrock well and serves 30 people. The other two water supplies located in Montpelier include the Murray Hill and Towne Hill water systems. The overlapping wellhead protection areas(WHPA) for these two systems are located approximately 1.5 miles to the south from the dump(3a)

In addition to the four public water supplies there are approximately 325 private drinking water wells within the four mile radius. The total population that relies on groundwater is approximately 860. The closest known groundwater drinking well is located about 700 feet from the dumpsite. It is believed all homes north of the fire hydrant, located at the dump entrance, are on private water supplies and septic systems. Groundwater potential and yield in the area are low(3b).

Surface waters which flow within the four mile radius include the North Branch of the Winooski River and the Winooski River in Montpelier, Dog River and Jones Brook in Berlin, Horn of the Moon

Pond, Nelson Pond, Chapels Pond, Bennett Brook and Mallory Brook in East Montpelier, and Wrightsville Reservoir and Sunny Brook in Middlesex(4). Major fish species home to the surface water bodies mentioned above include: brown trout, creek chub, longnose dace and blacknose dace. There are no known state fish accesses, but there are no restrictions to accessing the rivers(5). The 15 mile surface water pathway begins in the small tributary at the dump and flows .25 miles into the North Branch of the Winooski River, then for approximately 2 miles into the Winooski River and finally 12.75 miles within the Winooski River to the Waterbury-Middlesex town line. The 15 mile surface water pathway does not flow through any wildlife management areas, but it does encounter several areas accessible by the public for recreational fishing(4).

Physiographically, Montpelier is located in the New England Uplands Province and tectonically in the Crystalline Appalachian Province of the Lower Devonian, Waits River formation. The bedrock is described as interbedded siliceous crystalline limestone and sericite-quartz-chlorite-phyllite that is highly metamorphosed and has been folded, faulted, jointed and fractured. Surficial materials within the area are of glacial and post glacial origin consisting of lacustrine clays and silts. These soils are poorly drained with medium to high plasticity. The soils belong in the Elliotsville-Monson-Abram complex and are so intermingled that it is not practical to map them separately. A general description of the soils at varying depths in the complex include a surface layer (0-2 inches) of very dark grayish brown silt loam, a subsoil(2-16 inches) of a yellowish to olive to dark brown channery silt loam, and a substratum (16-28 inches) of olive brown channery silt loam to phyllite bedrock. Included with these soils are areas of moderately deep, poorly drained soils found in small depressions and drainage ways and very deep moderately well drained soils found on footslopes(1b).

The closest weather reporting station to the Old Montpelier Dump is the Montpelier FAA airport located approximately six miles to the south. The mean annual precipitation has been recorded at 33.94 inches with a mean annual lake evaporation of 23 inches resulting in a net annual precipitation of 10.94 inches(1b).

There are a number of Palustrine and Riverine wetlands mapped within a four mile radius of the site. The closest identified wetland is a Palustrine emergent wetland system commonly referred to as marshes, wet meadows or fens(6). There is one known occurrence of a significant natural community located within the four mile radius of the dump. Name and location can be found by contacting the VT ANR, Natural Heritage Program(7).

Recreational areas within the area include the Montpelier Recreation Park and Picnic Area located approximately 2400 feet south of the dump. This facility provides a swimming pool, tennis courts, baseball and softball diamonds, and volley ball courts. Other areas include the Wrightsville Dam Recreational Area, fishing and canoeing along the identified surface waters, several educational institutions(playgrounds), Montpelier Elks Ski Touring Center, Montpelier Golf Course, Vermont State House, and Vermont

Museum(Map 1)(8).

IV. RECEPTORS

Identified receptors within a four mile radius include surface and groundwater, an occurrence of a significant natural community and direct human exposure. The surface waters of concern located in Montpelier are the Winooski River, North Branch of the Winooski River, and the small tributary that flows through the dump. Lab results from the small tributary at the dump suggest past disposal activities are impacting the quality of the stream. The surface water pathway begins with the tributary stream and ends 15 downstream miles in the Winooski River at the Waterbury-Middlesex town line.

The majority of the population in close proximity to the dump are served by the municipal water system. However, there are several public community water supplies within a four mile radius. The estimated total population that relies on groundwater is 860 people. The closest drinking water well is an artesian well supplying water to the house just north of the dump entrance which is approximately 700 feet downgradient of the dump. The exact location of this well is unknown. All other homes north of the dump entrance are assumed to be supplied by private drinking water wells.

The VT ANR, Natural Heritage Program identified one occurrence of a natural community within the four mile radius of the dump.

Direct human exposure can occur through direct skin contact or ingestion of contaminated soils or sediments, inhalation of airborne contaminated dusts and soils and consumption of contaminated surface water.

V. METHODS

Sampling activities were conducted in accordance with the Old Montpelier Dump SI Sampling Plan. Sampling media comprised of surface and groundwater, soils including the granite sludge, and sediment. Samples were analyzed for volatile organic chemicals(VOC's) using EPA method 8240, semi-volatile chemicals(SVOC's) using EPA method 8270, and metals to include zinc, lead, nickel cadmium chromium arsenic selenium and mercury (Zn, Pb, Ni, Cd, Cr, As, Se and Hg). All samples were analyzed by the DEC lab. Upon arrival to the dump, the sampling team collected background air readings using an Hnu(photoionization device) which recorded 0 ppm. A decontamination area for equipment and personnel wash was set-up, and all sampling locations were selected by the project manager and sampling team prior to collection. The selected sampling locations are provided on Map 4 and Table 1.

TABLE 1

SAMPLE ID	MEDIA	PARAMETERS	LOCATION
Surface Water:			
SW-1	Surface Water	VOC's, Metals	Above Culvert (Stream B)
SW-2	Surface Water	VOC's, Metals	Stream A
SW-3	Surface Water	VOC's, Metals	Below Confluence
SW-4	Surface Water	VOC's, Metals	Background (Stream A)
Sediment:			
SD-1	Sediment	SVOC's, Metals	Stream B
SD-2	Sediment	SVOC's, Metals	Stream A
SD-3	Sediment	SVOC's, Metals	Below Confluence
SD-4	Sediment	SVOC's, Metals	Background(Stream A)
SD-5	Sediment	SVOC's, Metals	Ponded Area
Soil:			
SB-1	Soil/Sludge	VOC's, SVOC's, Metals	Pit #1
SB-2	Soil/Sludge	VOC's, SVOC's, Metals	Pit #2
SB-3	Soil/Sludge	VOC's, SVOC's Metals	Pit #3
SB-4	Soil/Sludge	VOC's, SVOC's Metals	Buried Pit Area
SB-6	Soils	VOC's, SVOC's, Metals	Far end of dump
SB-7	Soils	VOC's, SVOC's, Metals	Far end of dump
SB-8	Soils	VOC's, SVOC's, Metals	Background
Groundwater:			
GW-1	Groundwater	VOC's, Metals	Below Pits
GW-2	Groundwater	VOC's, Metals	Replicate of GW-1
GW-3	Groundwater	VOC's, Metals	Swampy Area on hill

Surface Water/Sediments:

Four surface water and sediment samples were collected and analyzed for VOC's, SVOC's and metals from the unnamed streams which flow through the dump. In this report the streams will be referred to as Stream A and Stream B(Map 4). SW-1 was sampled in Stream B below the storage yard and before the culvert, SW-2 was sampled in Stream A above the confluence of both streams, SW-3 was sampled below the confluence of both streams, and SW-4 was sampled upstream in Stream A to represent the background conditions.

The surface water samples for VOC analysis were collected with a 500ml beaker, then poured into 40 ml VOC bottles. The 500 ml beaker was rinsed several times with stream water prior to collection of VOC's. The sediment samples were collected with a shovel and transferred to sample bottles using a metal spoon for the SVOC's, and a plastic spoon for metals. The sediments in sample SD-1 and SD-4 were fine and sandy and the water in SD-1 was orange in color. The sediments in SW-2/SD-2 and SW-3/SD-3 were gravelly and cobbly. Conductivity (measured in umhos/cm^3) and temperature (measured in celsius) readings are provided in the table below:

	SW-1	SW-2	SW-3	SW-4
Temperature	6	4.5	4.5	4.4
Conductivity	978	73	130	72

Groundwater:

Two groundwater samples(GW-1, GW-3) and a replicate(GW-2) were collected from seeps in an effort to determine if landfill leachate, granite sludge or sewage are impacting the quality of the groundwater in the area. GW-1 and the replicate sample GW-2 were collected below the granite sludge pits to the north side of the dump road, and GW-3 was collected from a seep located on the northwesterly portion of the dump towards the former municipal dump. All samples were collected with a plastic beaker and then poured into two liter containers for metals and 40 ml vials for VOC's.

Soils:

Four granite sludge samples were collected from current and past sludge disposal pits, and analyzed for VOC's, SVOC's and metals. The sludge samples were hand augered or shoveled for collection. All samples were screened for organic vapors with an Hnu photoionization device(Hnu). SB-1 was collected at 6-10 inches below the surface with a shovel, and the sample was very saturated and sticky; SB-2 was collected near the surface with a shovel and was more clayey and wet than SB-1; SB-3 and SB-4 were collected at

8 inches below the ground surface with a hand auger. During the collection of SB-3, the sampling team noticed the sludge smelled like sewage. SB-5 was cancelled due to the unknown location of the buried sludge pits(1d).

In addition to the four granite sludge pit samples, three soil samples were collected and analyzed for VOC's, SVOC's and metals. SB-6 and SB-7 were collected from the stockpiled contaminated petroleum soils located at the back of the dump. They are composite samples from four random locations. All samples were screened for organic vapors with an Hnu during sample collection. While collecting one of the samples to be composited from SB-7, a steady reading of 20-30 ppm was recorded on the Hnu with occasional jumps to 50 ppm. SB-8 was collected at the southeast portion of the dump as the background soil sample(1d).

All samples were collected using a bucket auger and then spooned into a glass bowl before transferring into the sample bottles. Soil was transferred from the bowl using a metal trowel for VOC's and SVOC's, and a plastic trowel for metals.

VI. RESULTS

The soil and sediment concentration values reported in Tables 2-6 are their dry weight values. The values provided on the laboratory sheets are their wet weight values. To convert wet weight to dryweight one needs to divide the reported concentration (found on the laboratory sheet) by the percent solid (found on laboratory sheet). This value was then rounded down to the next whole number.

Surface Water/Sediments:

Surface water samples were analyzed for VOC's and dissolved metals, and sediments were analyzed for SVOC's and metals. Of the nine metals analyzed in surface water, copper and nickel show levels at or near the background readings, but zinc levels are highly elevated at 666ppb compared to background at <40ppb. No VOC's were detected in any of the surface water samples.

Lower levels of metals were detected in upstream sediment samples compared to downstream sediment samples, and the highest metal readings are from samples collected from Stream B(SD-1 and SD-5). The sediment sample collected from SD-5(Stream B) is the most highly contaminated sample (of the nine metals analyzed for in each sample) compared to the background sample SD-4(Stream A). Copper was detected at 60 ppm(6 times background), chromium was detected at 29 ppm (3 times background), cadmium was detected at 1 ppm (1.5-2 times background), nickel was detected at 42 ppm (4.5 times background), and arsenic was detected at 17 ppm (1.5-2 times background). The sediment sample collected from SD-1(Stream B) resulted in the highest zinc levels at 478 ppm (14 times background) and the highest lead levels at 161 ppm (66 times the background). Elevated levels of the SVOC's analyzed for have been

detected in the sediment samples SD-1, SD-2, and SD-3. Levels are highest in SD-1 and SD-3 which are samples collected from Stream B and below the confluence. No presence of SVOC's have been detected in SD-5 and SD-4 suggesting the SVOC's in Stream B are possibly impacting Stream A below the confluence. The presence of these SVOC's in Stream B and Stream A below the confluence maybe related to the migration of contaminants from the onsite disposal areas(Appendix I-Table 3,6,7). These results indicate that dump activities may have some impact on the stream quality.

The analytical results for surface water and sediments are included in Appendix I.

Groundwater:

Groundwater samples were analyzed for VOC's and metals. The results of samples collected from the three onsite locations indicate no presence of VOC's and metals in groundwater except nickel detected at 11 ppb in GW-2. The analytical reports are included in Appendix II-Table 7.

Soils:

Soil samples were analyzed for VOC's, SVOC's and metals. Only the background sample is a true representative sample of the native soils of the site. These soils will be compared to the background sample(SB-8). The sludge samples are waste from the local granite sheds and storm line debris(SB1,2,3,4), and the petroleum soils are from downtown Montpelier(SB-6,7).

Four VOC's were detected which include 2-butanone, toluene, ethylbenzene and xylenes. These were detected in the granite sludge pits 2 and 3(Map 4).

Twelve SVOC's were identified by method 8270, in SB-2, SB-3, SB-6, and SB-7 which include: phenanthrene, anthracene, flouranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]flouranthene, benzo[k]flouranthene, benzo[a]pyrene, indeno[1,2,3,cd]anthracene, dibenz[a,h]anthracene, and benzo[g,h,i]perylene. No SVOC's were detected in SB-1 (presumably granite sludge), SB-4(buried sludge pit) and SB-8(background sample). These SVOCs are also referred to as polycyclic aromatic hydrocarbons(PAH's).

PAH's are a group of chemicals that are formed during the incomplete burning of coal, oil, and gas, garbage, or other organic substances. There is no known use for most of these chemicals except for research purposes. PAH's are also found in crude oil, coal tar pitch, creosote, and road and roofing tar. Most PAH's do not dissolve easily in water, but some PAH's readily evaporate into the air. PAH's can enter surface water through atmospheric deposition and from discharges of industrial effluents.

All of the metals analyzed for have been detected in the soils. But, concentrations of copper, lead and zinc show elevated levels. The highest metal readings are from SB-6 (petroleum contaminated stockpiled soils)where copper was detected at 868 ppm, lead at 246 ppm, and zinc at 527 ppm. The background metals readings in SB-8 detected copper at 20 ppm, lead at 20 ppm, and

zinc at 55 ppm. The analytical reports are included in Appendix III-Table 2,4,5).

VII. CONCLUSION

Based upon the information collected as part of this SI the following conclusions can be drawn:

1. Results of samples collected by the DEC indicate the presence of VOC's, SVOC's and metals in samples collected at the site.

2. Sampling results indicate that dump activities may have impacted the quality of onsite surface water, sediments and soils. Sediment samples (SD-1 and SD-5) have elevated levels of metals which include lead, copper, chromium, cadmium, nickel, arsenic and zinc at levels up to 66 times the background levels. In addition, the sampling results show elevated levels of SVOC's. Concentrations of SVOC's in Stream A below the confluence (SD-3) were greater than two times the levels detected above the confluence (SD-2); no SVOC's were detected in the background sample. The soil samples show elevated levels of copper, lead, and zinc in one of the samples of petroleum contaminated soils and the presence of SVOC's in both the sludge pits and the petroleum contaminated soils. The VOC's 2-butanone, toluene, ethylbenzene, and xylene were detected in the sludge pit samples.

3. Results of the groundwater and surface water samples detected nickel at 11 ppm in groundwater and no presence of VOC's detected in groundwater or surface water. However, only one seep within the area of the dump was sampled for VOC and metals analysis so these results may not be a true representation of the groundwater quality beneath the site.

VIII. RECOMMENDATION

According to the surface water, sediment and soils results, it appears the past disposal practices at the Old Montpelier Stump Dump have adversely impacted the quality of the stream that flows adjacent to the dump. As a result of these elevated levels of metals, VOC's and SVOC's in the sampling media it is recommended under CERCLA that further investigations be conducted at the Old Montpelier Stump Dump.

REFERENCES

1. VT ANR, Hazardous Materials Management Division, Old Montpelier Stump Dump file.
   a. Land Deeds
   b. Guere, Linda 1990, "Old Montpelier Stump Dump Preliminary Assessment" VT ANR, HMMD.
   c. UST Program, Tank Pull Form.
   d. SI Trip Report dated 7 November 90.

2. Brabant John, VT ANR Solid Waste Division, Telecon Interview 21 June 91 with L. Guere, VT ANR

3. VT DEC, Water Supply Division, Groundwater Management Section.
   a. Delineated WHPA maps for the town of Montpelier-4 mile radius.
   b. Well logs for the town of Montpelier-4 mile radius.

4. Topographic Maps, Scale 1:24000, 7.5'Series.
   Montpelier Quadrangle, 1968.

5. Memo to John Clausen, VT ANR, Fisheries Manager, dated May 14, 1990, "Fish Species and population along the North Branch and its tributaries" from Linda Guere, VT ANR.

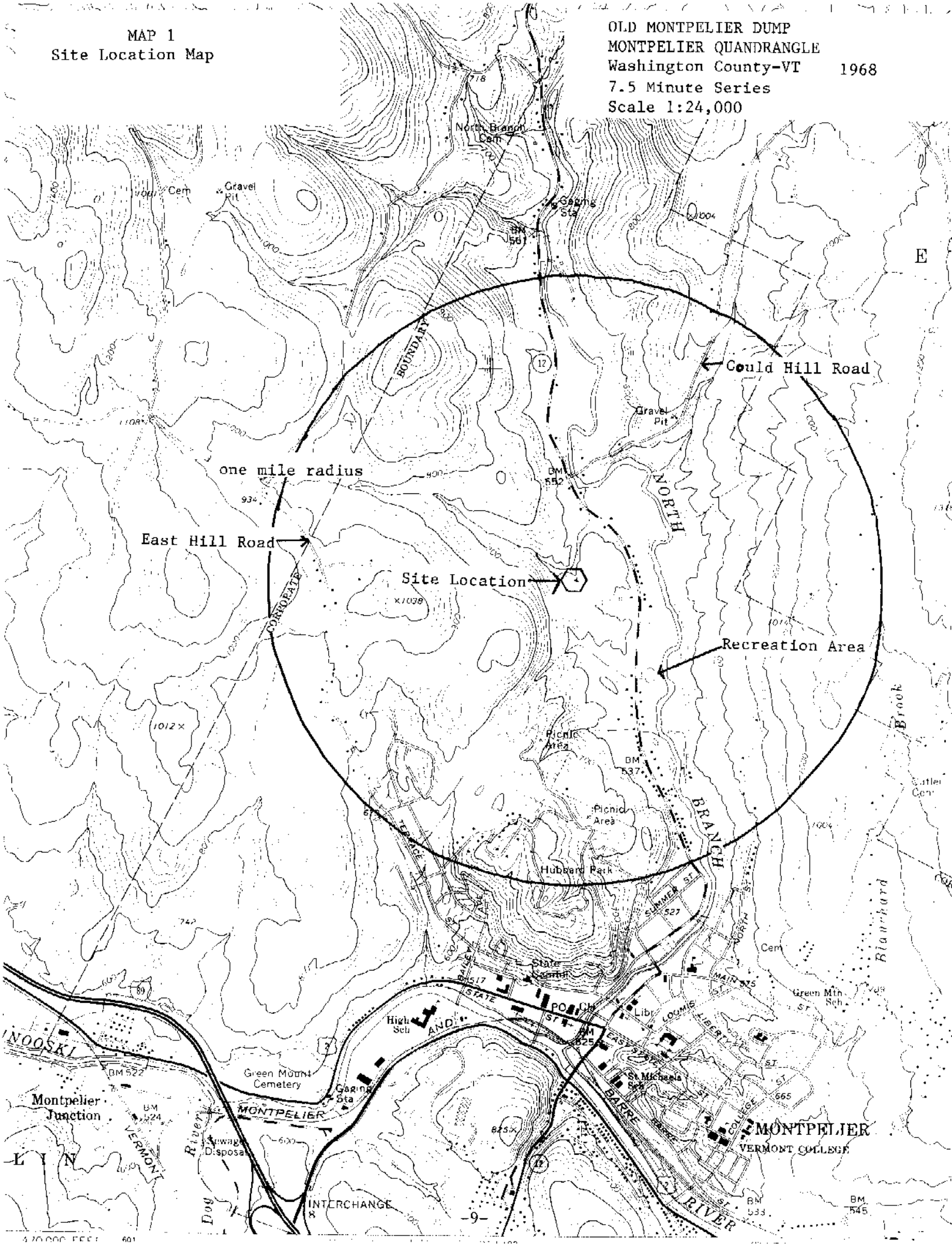
6. U.S. Department of Commerce, National Wetlands Inventory Topographic Maps, Montpelier Quadrangle, Scale 1:24,000, 7.5' Minute Series.

7. VT ANR, Department of Fish and Wildlife, Natural Heritage Program, memorandum dated 9 May 90, to Everett Marshall from L. Guere.

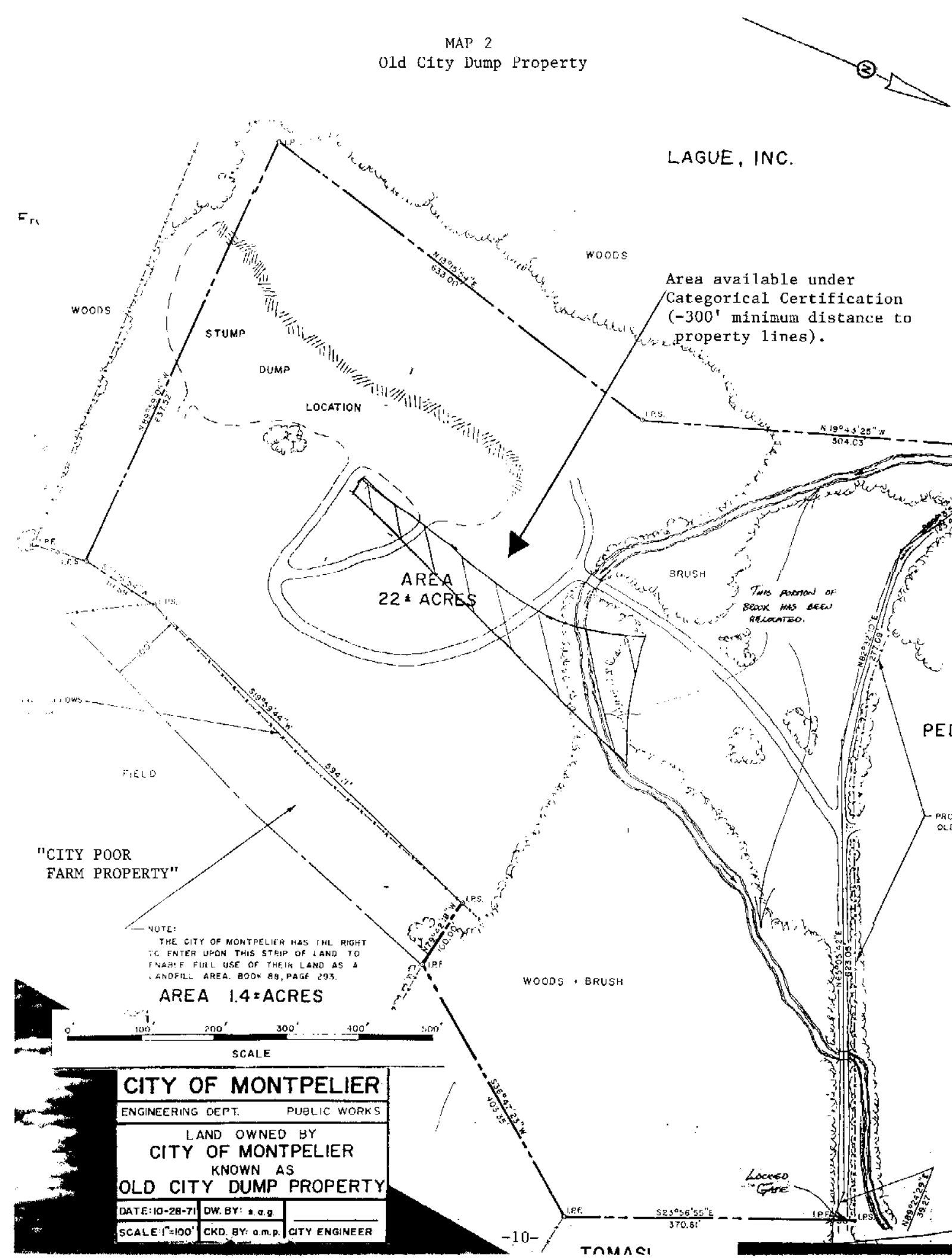
8. Northern Cartographic, 1985, The Vermont Road Atlas and Guide.

MAP 1
Site Location Map

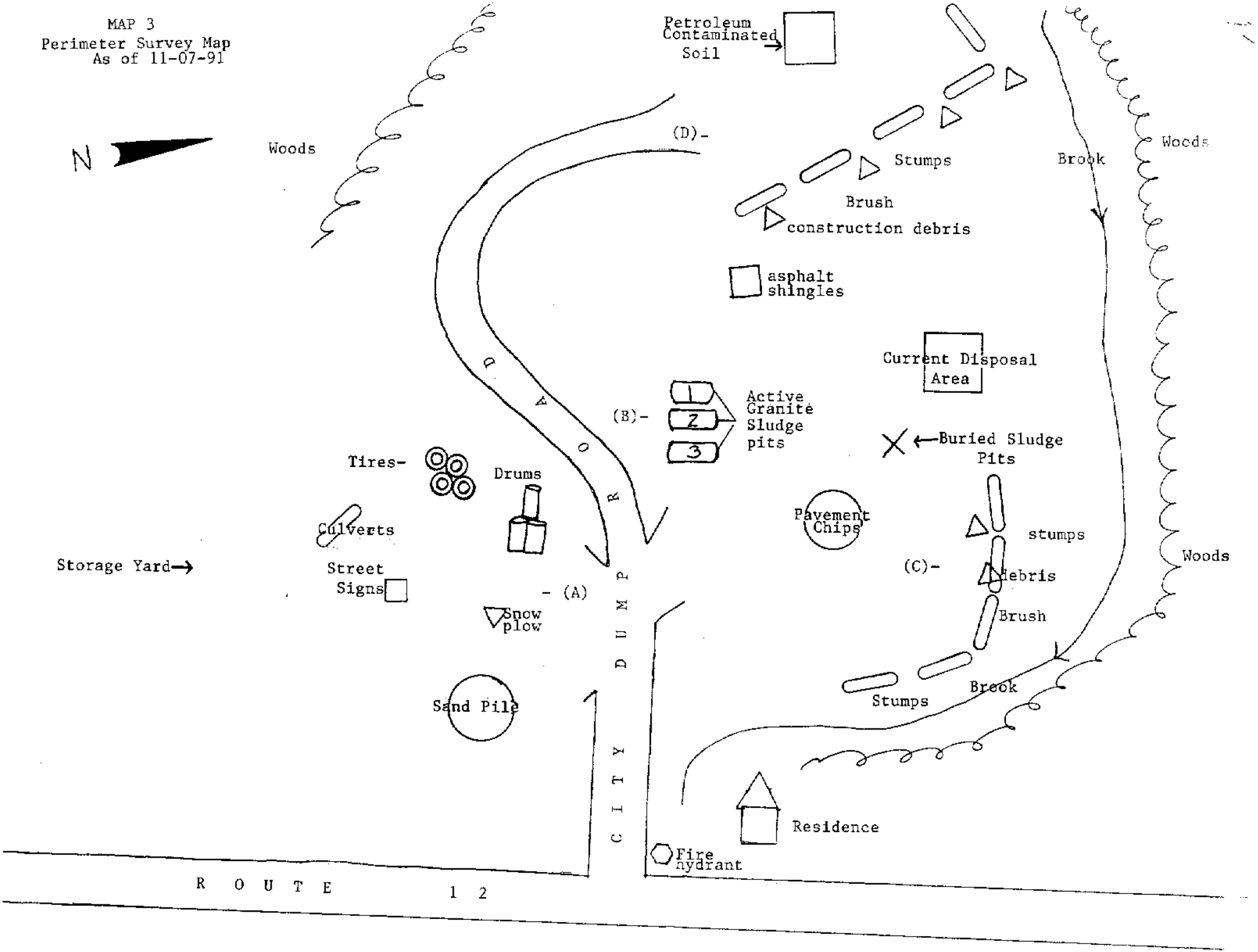
OLD MONTPELIER DUMP
MONTPELIER QUANDRANGLE
Washington County-VT 1968
7.5 Minute Series
Scale 1:24,000

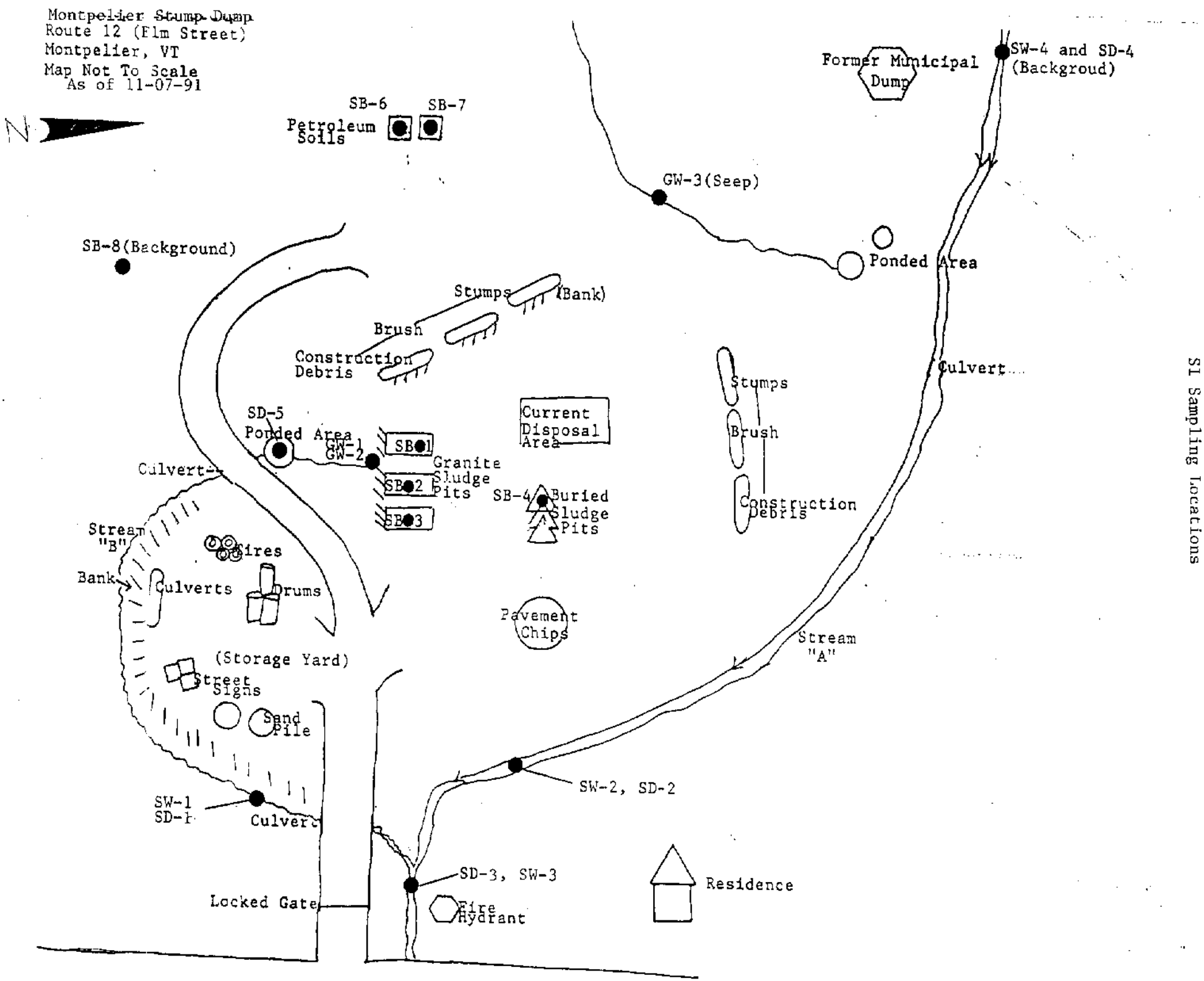


MAP 2
Old City Dump Property



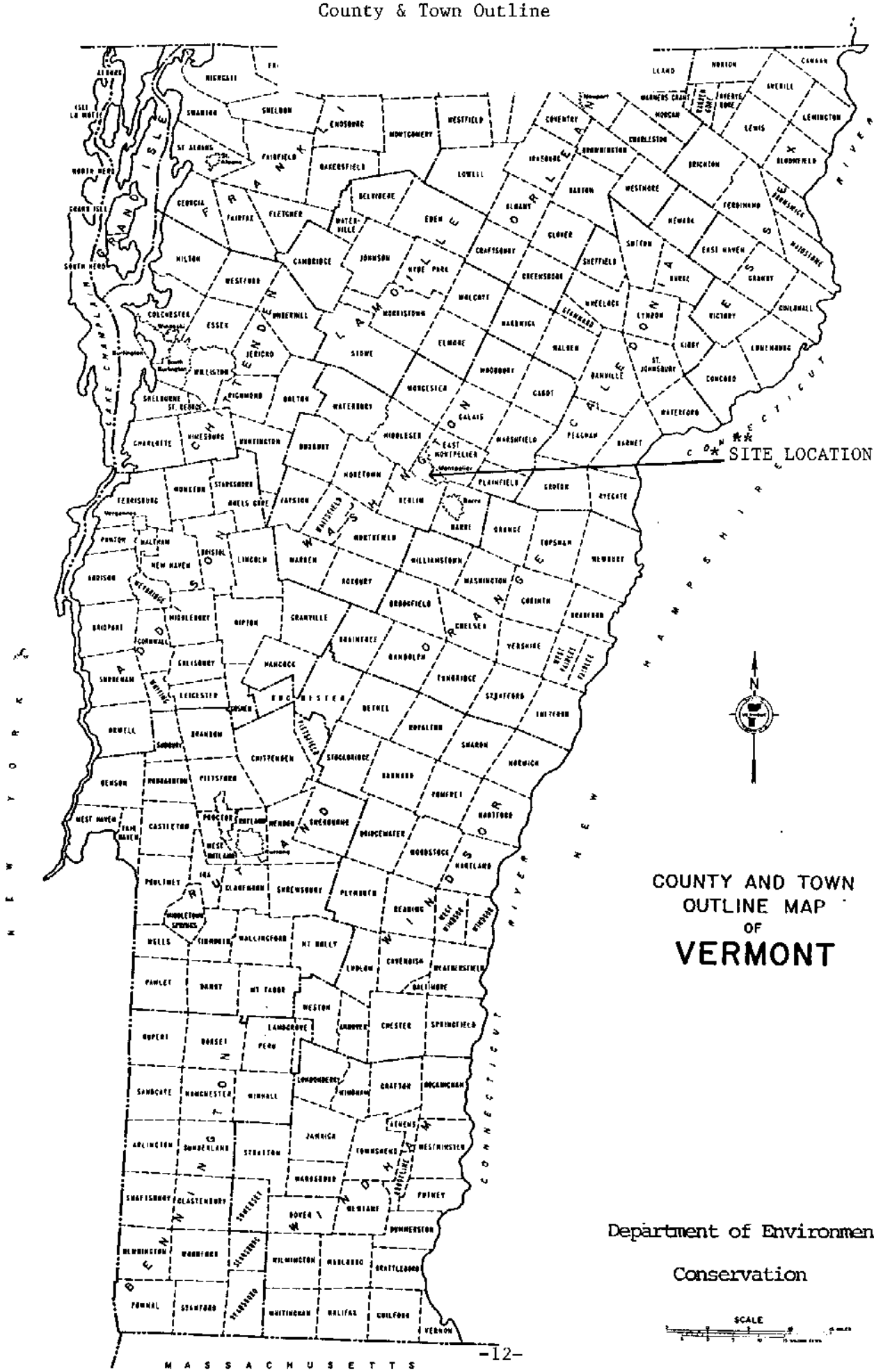
MAP 3
Perimeter Survey Map
As of 11-07-91





Map 4
SI Sampling Locations

MAP 5
County & Town Outline



APPENDIX A

SAMPLE RESULT SUMMARY TABLES

TABLE 2
OLD MONTPELIER STUMP DUMP
METALS-SOILS mg/kg (ppm)

SAMPLE LOCATIONS

PARAMETER	SB-1	SB-2	SB-3	SB-4	SB-6	SB-7	SB-8
COPPER	69	36	74	42	868	36	20
CHROMIUM	34	13	24	11	15	16	14
CADMIUM	<0.76	<.649	<.70	<.66	<.62	<.58	<.64
LEAD	12	35	126	13	246	140	20
NICKEL	30	14	25	7	28	22	22
ZINC	44	85	184	46	527	111	55
MERCURY	<.030	.045	.094	<.02	.18	.03	.028
ARSENIC	10	6	12	8	10	13	12
SELENIUM	<0.38	<0.32	<.35	<.33	<.31	<.29	<.32
% SOLID	65	77	71	75	80	86	77

Concentrations have been converted to dryweight

TABLE 3
OLD MONTPELIER STUMP DUMP
METALS-SEDIMENTS mg/kg(ppm)

Parameter	SD-1	SD-2	SD-3	SD-4	SD-5
COPPER	27	10	10	8	60
CHROMIUM	9	8	9	8	29
CADMIUM	.92	<.625	<.61	<.62	1.00
LEAD	161	21	11	2	109
NICKEL	15	9	10	9	42
ZINC	478	43	71	34	302
MERCURY	<0.028	<.025	<.20	.03	<.13
ARSENIC	7	6	10	9	17
SELENIUM	<.35	<.31	<.30	<.32	<.50
% SOLID	71	80	81	77	50

Concentrations have been converted to dryweight

TABLE 4
OLD MONTPELIER STUMP DUMP
VOLATILE ORGANIC CHEMICALS-SOILS ug/kg (ppb)

	SAMPLE LOCATIONS						
PARAMETER	SB-1	SB-2	SB-3	SB-4	SB-6	SB-7	SB-8
2-BUTANONE	ND	30,909	ND	ND	ND	ND	ND
TOLUENE	ND	33,636	373	ND	ND	ND	ND
ETHYLBENZENE	ND	35	ND	ND	ND	ND	ND
XYLENES	ND	ND	274	ND	ND	ND	ND

ND-NOT DETECTED
Concentrations have been converted to dryweight

TABLE 5
OLD MONTPELIER STUMP DUMP
SEMI-VOLATILE ORGANIC CHEMICALS-SOILS ug/kg(ppb)

SAMPLE LOCATIONS

Parameter	SB-1	SB-2	SB-3	SB-4	SB-6	SB-7	SB-8
Phenanthrene	ND	5063	6000	ND	3950	1061	ND
Anthracene	ND	911	1466	ND	864	283	ND
Flouranthene	ND	6708	5200	ND	5679	2558	ND
Pyrene	ND	6075	4666	ND	5061	2962	ND
Benzo[a]Anthracene	ND	2405	3200	ND	3703	1012	ND
Chrysene	ND	2405	4533	ND	3827	839	ND
Benzo[b]Flouranthene	ND	784	5333	ND	3703	1160	ND
Benzo[k]Flouranthene	ND	2025	5200	ND	3086	839	ND
Benzo[a]Pyrene	ND	2531	4266	ND	4197	753	ND
Indeno[1,2,3,cd] Anthracene	ND	1518	3066	ND	6543	975	ND
Dibenz[a,h]Anthracene	ND	253	ND	ND	691	320	ND
Benzo[g,h,i]Perylene	ND	1139	3600	ND	7407	950	ND
Percent Moisture	38	21	25	21	19	14	23

ND-Not Detected
Concentrations have been converted to dryweight

TABLE 6
OLD MONTPELIER STUMP DUMP
SEMI-VOLATILE ORGANIC CHEMICALS
SEDIMENTS ANALYSIS ug/kg (ppb)

SAMPLE LOCATION

Parameter	SD-1	SD-2	SD-3	SD-4	SD-5
Phenanthrene	3,802	462	1,111	ND	ND
Anthracene	DB	DB	DB	NB	DB
Flouranthene	6,338	812	2,345	ND	ND
Pyrene	6,056	762	1,975	ND	DB
Benzo[a]Anthracene	2,253	DB	925	ND	DB
Chrysene	2,253	DB	777	ND	DB
Benzo[b]Flouranthene	2,253	350	679	ND	DB
Benzo[k]Flouranthene	1,971	DB	679	ND	DB
Benzo[a]Pyrene	2,253	DB	617	ND	DB
Indeno[1,2,3,cd] Anthracene	1,830	DB	469	ND	ND
Dibenz[a,h] Anthracene	DB	ND	ND	ND	ND
Benzo[g,h,i]Perylene	1,225	DB	308	ND	ND
% Moisture	24	22	17	19	57

DB-Detected but below approximate detection limit
ND-Not Detected

Concentrations have been converted to dryweight

TABLE 7
OLD MONTPELIER STUMP DUMP
METALS ANALYSIS
SURFACE AND GROUNDWATER ug/l (ppb)

	SAMPLE LOCATION						
Parameter	SW-1	SW-2	SW-3	SW-4	GW-1	GW-2	GW-3
Copper	22	<10	23	17	<10	<10	<10
Chromium	<10	<10	<10	<10	<10	<10	<10
Cadmium	<2	<2	<2	<2	<2	<2	<2
Lead	<10	<10	<10	<10	<10	<10	<10
Nickel	11	<10	12	<10	<10	11	<10
Zinc	666	<40	44	<40	<40	<40	<40
Mercury	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arsenic	<5	<5	<5	<5	<5	<5	<5
Selenium	<5	<5	<5	<5	<5	<5	<5

APPENDIX B

LABORATORY ANALYSIS SHEETS

SOIL-METALS

SEDIMENTS-METALS

SOIL-VOC'S

SOILS-SVOC'S

SEDIMENTS-SVOC'S

SURFACE WATER-METALS

SURFACE WATER-VOC'S

GROUNDWATER-METALS

GROUNDWATER-VOC'S

Old Montpelier Stump Dump
Site Investigation
Laboratory Analysis Reports
Soils-Metals

FINAL LAB REPORT

DATE 04/10/91

LAB ID 58624 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SB-1 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL		45.20	MG/KG WW		12/10/90
SCR	CHROMIUM SOIL		22.50	MG/KG WW		12/11/90
SCD	CADMIUM SOIL	<	0.50	MG/KG WW		12/10/90
SPB	LEAD SOIL		7.92	MG/KG WW		12/11/90
SNI	NICKEL SOIL		19.50	MG/KG WW		12/11/90
SZN	ZINC SOIL		29.10	MG/KG WW		12/11/90
SHG	MERCURY SOIL	<	0.020	MG/KG WW		12/06/90
SAS2	ARSENIC SOIL - FURNACE		6.76	MG/KG WW		12/18/90
SSE2	SELENIUM SOIL - FURNACE	<	0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL		0	NONE	U	12/10/90
824S	METHOD 8240 TESTS, SOIL		0	NONE	U	11/20/90
PSOL	SOLIDS-PERCENT		65.000	PERCENT		12/03/90

DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 04/10/91

LAB ID 58625 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SB-2 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME	RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL	28.30	MG/KG WW		12/27/90
SCR	CHROMIUM SOIL	10.50	MG/KG WW		12/11/90
SCD	CADMIUM SOIL	< 0.50	MG/KG WW		12/10/90
SPB	LEAD SOIL	27.10	MG/KG WW		12/27/90
SNI	NICKEL SOIL	11.30	MG/KG WW		12/11/90
SZN	ZINC SOIL	66.00	MG/KG WW		12/27/90
SHG	MERCURY SOIL	0.035	MG/KG WW		12/14/90
SAS2	ARSENIC SOIL - FURNACE	4.67	MG/KG WW		12/18/90
SSE2	SELENIUM SOIL - FURNACE	< 0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL	0	NONE	T	12/10/90
824S	METHOD 8240 TESTS, SOIL	0	NONE	T	11/20/90
VS31	:TOLUENE	25900	UG/KG WW		11/20/90
SS25	'4-METHYLPHENOL	3800	UG/KG WW		12/10/90
SS34	'NAPHTHALENE	150	UG/KG WW		12/10/90
SS39	'2-METHYLNAPHTHALENE	100	UG/KG WW		12/10/90

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DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 02/05/91

LAB ID 58626 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SB-3 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL		53.20	MG/KG WW		12/10/90
SCR	CHROMIUM SOIL		17.40	MG/KG WW		12/11/90
SCD	CADMIUM SOIL	<	0.50	MG/KG WW		12/10/90
SPB	LEAD SOIL		89.70	MG/KG WW		12/11/90
SNI	NICKEL SOIL		17.90	MG/KG WW		12/11/90
SZN	ZINC SOIL		131.00	MG/KG WW		12/27/90
SHG	MERCURY SOIL		0.067	MG/KG WW		12/14/90
SAS2	ARSENIC SOIL - FURNACE		8.54	MG/KG WW		12/27/90
SSE2	SELENIUM SOIL - FURNACE	<	0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL		0	NONE	I	12/10/90
824S	METHOD 8240 TESTS, SOIL		0	NONE	I	11/20/90
VS31	:TOLUENE		265	UG/KG WW		11/20/90
VS39	:XYLENES		195	UG/KG WW		11/20/90
SS34	*NAPHTHALENE		380	UG/KG WW		12/10/90
SS39	*2-METHYLNAPHTHALENE		440	UG/KG WW		12/10/90

DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 02/05/91

LAB ID 58627 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SB-4 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL		31.60	MG/KG WW		12/10/90
SCR	CHROMIUM SOIL		8.82	MG/KG WW		12/11/90
SCD	CADMIUM SOIL	<	0.50	MG/KG WW		12/10/90
SPB	LEAD SOIL		9.87	MG/KG WW		12/11/90
SNI	NICKEL SOIL		5.56	MG/KG WW		12/11/90
SZN	ZINC SOIL		35.10	MG/KG WW		12/11/90
SHG	MERCURY SOIL	<	0.020	MG/KG WW		12/06/90
SAS2	ARSENIC SOIL - FURNACE		6.36	MG/KG WW		12/18/90
SSE2	SELENIUM SOIL - FURNACE	<	0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL		0	NONE	Z	12/10/90
824S	METHOD 8240 TESTS, SOIL		0	NONE	Z	11/20/90
PSOL	SOLIDS-PERCENT		75.000	PERCENT		12/03/90

DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 02/05/91

LAB ID 58628 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SB-6 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL		695.00	MG/KG WW		12/27/90
SCR	CHROMIUM SOIL		12.20	MG/KG WW		12/11/90
SCD	CADMIUM SOIL	<	0.50	MG/KG WW		12/10/90
SPB	LEAD SOIL		197.00	MG/KG WW		12/27/90
SNI	NICKEL SOIL		22.80	MG/KG WW		12/27/90
SZN	ZINC SOIL		422.00	MG/KG WW		12/27/90
SHG	MERCURY SOIL		0.150	MG/KG WW		12/14/90
SAS2	ARSENIC SOIL - FURNACE		8.42	MG/KG WW		12/18/90
SSE2	SELENIUM SOIL - FURNACE	<	0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL		0	NONE	1	12/10/90
824S	METHOD 8240 TESTS, SOIL		0	NONE	Z	11/20/90
SS34	*NAPHTHALENE		390	UG/KG WW		12/10/90
SS39	*2-METHYLNAPHTHALENE		200	UG/KG WW		12/10/90
SS45	*ACENAPHTHALENE		540	UG/KG WW		12/10/90
SS48	*ACENAPHTHENE		180	UG/KG WW		12/10/90

FINAL LAB REPORT

DATE 02/05/91

LAB ID 58629 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SB-7 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL		31.20	MG/KG WW		12/10/90
SCR	CHROMIUM SOIL		14.20	MG/KG WW		12/27/90
SCD	CADMIUM SOIL	<	0.50	MG/KG WW		12/10/90
SPB	LEAD SOIL		121.00	MG/KG WW		12/27/90
SNI	NICKEL SOIL		19.60	MG/KG WW		12/27/90
SZN	ZINC SOIL		96.00	MG/KG WW		12/27/90
SHG	MERCURY SOIL		0.034	MG/KG WW		12/06/90
SAS2	ARSENIC SOIL - FURNACE		11.70	MG/KG WW		12/27/90
SSE2	SELENIUM SOIL - FURNACE	<	0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL		0	NONE	T	12/10/90
824S	METHOD 8240 TESTS, SOIL		0	NONE	T	11/20/90
VS20	:2-BUTANONE		25600	UG/KG WW		11/20/90
SS34	*NAPHTHALENE		1700	UG/KG WW		12/10/90
SS39	*2-METHYLNAPHTHALENE		3000	UG/KG WW		12/10/90
SS45	*ACENAPHTHALENE		320	UG/KG WW		12/10/90

DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 02/05/91

LAB ID 58630 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SB-8 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL		15.80	MG/KG ww		12/10/90
SCR	CHROMIUM SOIL		11.30	MG/KG ww		12/11/90
SCD	CADMIUM SOIL	<	0.50	MG/KG ww		12/10/90
SPB	LEAD SOIL		16.10	MG/KG ww		12/11/90
SNI	NICKEL SOIL		17.30	MG/KG ww		12/11/90
SZN	ZINC SOIL		42.60	MG/KG ww		12/11/90
SHG	MERCURY SOIL		0.022	MG/KG WW		12/06/90
SAS2	ARSENIC SOIL - FURNACE		9.94	MG/KG ww		12/18/90
SSE2	SELENIUM SOIL - FURNACE	<	0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL		0	NONE	Z	12/10/90
824S	METHOD 8240 TESTS, SOIL		0	NONE	Z	11/20/90
PSOL	SOLIDS-PERCENT		77.000	PERCENT		12/03/90

Old Montpelier Stump Dump
Site Investigation
Laboratory Analysis Reports
Sediments-metals

FINAL LAB REPORT

DATE 02/04/91

LAB ID 58635 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SD-1 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME	RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL	19.20	MG/KG WW		12/10/90
SCR	CHROMIUM SOIL	6.60	MG/KG WW		12/27/90
SCD	CADMIUM SOIL	0.66	MG/KG WW		12/10/90
SPB	LEAD SOIL	115.00	MG/KG WW		12/27/90
SNI	NICKEL SOIL	10.90	MG/KG WW		12/11/90
SZN	ZINC SOIL	340.00	MG/KG WW		12/11/90
SHG	MERCURY SOIL	< 0.020	MG/KG WW		12/06/90
SAS2	ARSENIC SOIL - FURNACE	5.58	MG/KG WW		12/18/90
SSE2	SELENIUM SOIL - FURNACE	< 0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL	0	NONE	I	12/10/90
SS45	*ACENAPHTHALENE	360	UG/KG WW		12/10/90
SS48	*ACENAPHTHENE	50	UG/KG WW		12/10/90
SS51	*DIBENZOFURAN	100	UG/KG WW		12/10/90
SS54	*FLUORENE	190	UG/KG WW		12/10/90
SS64	*PHENANTHRENE	2700	UG/KG WW		12/10/90

DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 02/04/91

LAB ID 58636 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SD-2 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL		8.68	MG/KG WW		12/10/90
SCR	CHROMIUM SOIL		6.76	MG/KG WW		12/11/90
SCD	CADMIUM SOIL	<	0.50	MG/KG WW		12/10/90
SPB	LEAD SOIL		17.30	MG/KG WW		12/27/90
SNI	NICKEL SOIL		7.97	MG/KG WW		12/11/90
SZN	ZINC SOIL		34.50	MG/KG WW		12/11/90
SHG	MERCURY SOIL	<	0.020	MG/KG WW		12/06/90
SAS2	ARSENIC SOIL - FURNACE		5.04	MG/KG WW		12/27/90
SSE2	SELENIUM SOIL - FURNACE	<	0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL		0	NONE	T	12/10/90
SS64	*PHENANTHRENE		370	UG/KG WW		12/10/90
SS65	*ANTHRACENE		50	UG/KG WW		12/10/90
SS67	*FLUORANTHENE		650	UG/KG WW		12/10/90
SS68	*PYRENE		610	UG/KG WW		12/10/90
SS70	*BENZO(A)ANTHRACENE		240	UG/KG WW		12/10/90

FINAL LAB REPORT

DATE 02/04/91

LAB ID 58637 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SD-3 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL		8.55	MG/KG WW		12/10/90
SCR	CHROMIUM SOIL		7.77	MG/KG WW		12/27/90
SCD	CADMIUM SOIL	<	0.50	MG/KG WW		12/10/90
SPB	LEAD SOIL		9.30	MG/KG WW		12/27/90
SNI	NICKEL SOIL		8.67	MG/KG WW		12/11/90
SZN	ZINC SOIL		58.00	MG/KG WW		12/11/90
SHG	MERCURY SOIL	<	0.020	MG/KG WW		12/06/90
SAS2	ARSENIC SOIL - FURNACE		8.57	MG/KG WW		12/27/90
SSE2	SELENIUM SOIL - FURNACE	<	0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL		0	NONE	T	12/10/90
SS45	*ACENAPHTHALENE		100	UG/KG WW		12/10/90
SS64	*PHENANTHRENE		900	UG/KG WW		12/10/90
SS65	*ANTHRACENE		160	UG/KG WW		12/10/90
SS67	*FLUORANTHENE		1900	UG/KG WW		12/10/90
SS68	*PYRENE		1600	UG/KG WW		12/10/90

DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 02/04/91

LAB ID 58638 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SD-4 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL		6.91	MG/KG WW		12/10/90
SCR	CHROMIUM SOIL		6.35	MG/KG WW		12/11/90
SCD	CADMIUM SOIL	<	0.50	MG/KG WW		12/10/90
SPB	LEAD SOIL		1.89	MG/KG WW		12/11/90
SNI	NICKEL SOIL		6.99	MG/KG WW		12/11/90
SZN	ZINC SOIL		26.40	MG/KG WW		12/11/90
SHG	MERCURY SOIL	<	0.020	MG/KG WW		12/06/90
SAS2	ARSENIC SOIL - FURNACE		7.31	MG/KG WW		12/27/90
SSE2	SELENIUM SOIL - FURNACE	<	0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL		0	NONE	Z	12/10/90
PSOL	SOLIDS-PERCENT		77.000	PERCENT		12/03/90

DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 02/04/91

LAB ID 58639 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SD-5 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
SCU	COPPER SOIL		30.20	MG/KG WW		12/10/90
SCR	CHROMIUM SOIL		14.90	MG/KG WW		12/11/90
SCD	CADMIUM SOIL	<	0.50	MG/KG WW		12/10/90
SPB	LEAD SOIL		54.60	MG/KG WW		12/11/90
SNI	NICKEL SOIL		21.00	MG/KG WW		12/11/90
SZN	ZINC SOIL		151.00	MG/KG WW		12/11/90
SHG	MERCURY SOIL		0.067	MG/KG WW		12/06/90
SAS2	ARSENIC SOIL - FURNACE		8.96	MG/KG WW		12/18/90
SSE2	SELENIUM SOIL - FURNACE	<	0.25	MG/KG WW		12/19/90
827S	METHOD 8270, SOIL		0	NONE	U	12/10/90
SS64	*PHENANTHRENE		100	UG/KG WW		12/10/90
SS67	*FLUORANTHENE		200	UG/KG WW		12/10/90
SS68	*PYRENE		200	UG/KG WW		12/10/90
SS70	*BENZO(A)ANTHRACENE		100	UG/KG WW		12/10/90
SS71	*CHRYSENE		100	UG/KG WW		12/10/90

Old Montpelier Stump Dump
Site Investigation
Laboratory Analysis Reports
Soils-VOC's

DEC 03 1990

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR METHOD 8240 GC/MS FOR VOLATILE ORGANICS - **SOILS**

SAMPLE NUMBER: 58624 ANALYST: SRL REMARKS CODE 824S: U
DATE RUN: 11-19-90 SAMPLE WT: 1.4g
SITE: SB-1 METHOD: Heated Purge

		Practical Quant. Limits Low-Level Soil (EPA)	TEST RESULTS ug/kg
VS07	Vinylchloride	10	ND
VS08	Chloromethane	10	ND
VS09	Bromomethane	10	ND
VS10	Chloroethane	10	ND
VS11	Trichlorofluoromethane	10	ND
VS12	Acetone	100	ND
VS13	1,1-Dichloroethene	5	ND
VS14	Carbondisulfide	5	ND
VS15	Methylene Chloride	5	ND
VS16	Methyl-t-Butylether (MTBE)	---	ND
VS17	1,2-Dichloroethene	5	ND
VS18	1,1-Dichloroethane	5	ND
VS19	Vinyl Acetate	50	ND
VS20	2-Butanone	100	ND
VS21	Chloroform	5	ND
VS22	1,1,1-Trichloroethane	5	ND
VS23	Carbon Tetrachloride	5	ND
VS24	Benzene	5	ND
VS25	1,2-Dichlorethane	5	ND
VS26	Trichloroethene	5	ND
VS27	1,2-Dichloropropane	5	ND
VS28	Bromodichloromethane	5	ND
VS29	4-Methyl-2-Pentanone	50	ND
VS30	Cis-1,3-Dichloropropene	5	ND
VS31	Toluene	5	ND
VS32	Trans-1,3-Dichloropropene	5	ND
VS33	1,1,2-Trichloroethane	5	ND
VS34	2-Hexanone	50	ND
VS35	Tetrachloroethene	5	ND
VS36	Dibromochloromethane	5	ND
VS37	Chlorobenzene	5	ND
VS38	Ethylbenzene	5	ND
VS39	Xylenes	5	ND
VS40	Styrene	5	ND
VS41	Bromoform	5	ND
VS42	1,1,2,2,-Tetrachloroethane	5	ND

REMARKS.....
GC-MS tentatively identified cumenes and higher boiling alkanes. TVH based on hexane is 2040 ug/kg.

GD\180-LOW

DEC 03 1990

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR METHOD 8240 GC/MS FOR VOLATILE ORGANICS - **SOILS**

SAMPLE NUMBER: 58625 ANALYST: SRL REMARKS CODE 824S: T

DATE RUN: 11-19-90 SAMPLE WT: 4.3g

SITE: SB-2 METHOD: Methanol Extract

		Practical Quant. Limits High-Level Soil (EPA) ug/kg	TEST RESULTS ug/kg
VS07	Vinylchloride	1250	ND
VS08	Chloromethane	1250	ND
VS09	Bromomethane	1250	ND
VS10	Chloroethane	1250	ND
VS11	Trichlorofluoromethane	1250	ND
VS12	Acetone	12500	ND
VS13	1,1-Dichloroethene	625	ND
VS14	Carbondisulfide	625	ND
VS15	Methylene Chloride	625	ND
VS16	Methyl-t-Butylether (MTBE)	---	ND
VS17	1,2-Dichloroethene	625	ND
VS18	1,1-Dichloroethane	625	ND
VS19	Vinyl Acetate	6250	ND
VS20	2-Butanone (MEK)	12500	23800
VS21	Chloroform	625	ND
VS22	1,1,1-Trichloroethane	625	ND
VS23	Carbon Tetrachloride	625	ND
VS24	Benzene	625	ND
VS25	1,2-Dichlorethane	625	ND
VS26	Trichloroethene	625	ND
VS27	1,2-Dichloropropane	625	ND
VS28	Bromodichloromethane	625	ND
VS29	4-Methyl-2-Pentanone	6250	ND
VS30	Cis-1,3-Dichloropropene	625	ND
VS31	Toluene	625	25900
VS32	Trans-1,3-Dichloropropene	625	ND
VS33	1,1,2-Trichloroethane	625	ND
VS34	2-Hexanone	6250	ND
VS35	Tetrachloroethene	625	ND
VS36	Dibromochloromethane	625	ND
VS37	Chlorobenzene	625	ND
VS38	Ethylbenzene	625	ND
VS39	Xylenes	625	ND
VS40	Styrene	625	ND
VS41	Bromoform	625	ND
VS42	1,1,2,2,-Tetrachloroethane	625	ND

REMARKS.....
GC-MS tentatively identified cumenes and higher boiling alkanes. TVH based on hexane is 24100 ug/kg.

GD\180-1222

DEC 03 1990

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY

DATA SHEET FOR METHOD 8240 GC/MS FOR VOLATILE ORGANICS - SOILS

SAMPLE NUMBER: 58626 ANALYST: SRL REMARKS CODE 824S: T

DATE RUN: 11-19-90 SAMPLE WT: 1.0g

SITE: SB-3 METHOD: Heated Purge

		Practical Quant. Limits Low-Level Soil (EPA)	TEST RESULTS ug/kg
VS07	Vinylchloride	10	ND
VS08	Chloromethane	10	ND
VS09	Bromomethane	10	ND
VS10	Chloroethane	10	ND
VS11	Trichlorofluoromethane	10	ND
VS12	Acetone	100	ND
VS13	1,1-Dichloroethene	5	ND
VS14	Carbondisulfide	5	ND
VS15	Methylene Chloride	5	ND
VS16	Methyl-t-Butylether (MTBE)	---	ND
VS17	1,2-Dichloroethene	5	ND
VS18	1,1-Dichloroethane	5	ND
VS19	Vinyl Acetate	50	ND
VS20	2-Butanone	100	ND
VS21	Chloroform	5	ND
VS22	1,1,1-Trichloroethane	5	ND
VS23	Carbon Tetrachloride	5	ND
VS24	Benzene	5	ND
VS25	1,2-Dichlorethane	5	ND
VS26	Trichloroethene	5	ND
VS27	1,2-Dichloropropane	5	ND
VS28	Bromodichloromethane	5	ND
VS29	4-Methyl-2-Pentanone	50	ND
VS30	Cis-1,3-Dichloropropene	5	ND
VS31	Toluene	5	265
VS32	Trans-1,3-Dichloropropene	5	ND
VS33	1,1,2-Trichloroethane	5	ND
VS34	2-Hexanone	50	ND
VS35	Tetrachloroethene	5	ND
VS36	Dibromochloromethane	5	ND
VS37	Chlorobenzene	5	ND
VS38	Ethylbenzene	5	25
VS39	Xylenes	5	195
VS40	Styrene	5	ND
VS41	Bromoform	5	ND
VS42	1,1,2,2,-Tetrachloroethane	5	ND

REMARKS.....

GC-MS tentatively identified cumenes and higher boiling alkanes. TVH based on hexane is 2840 ug/kg.

GD\180-LOW

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR METHOD 8240 GC/MS FOR VOLATILE ORGANICS - **SOILS**

SAMPLE NUMBER: 58627 ANALYST: SRL REMARKS CODE 824S: Z
DATE RUN: 11-20-90 SAMPLE WT: 1.4g
SITE: SB-4 METHOD: Heated Purge

		Practical Quant. Limits Low-Level Soil (EPA)	TEST RESULTS ug/kg
VS07	Vinylchloride	10	ND
VS08	Chloromethane	10	ND
VS09	Bromomethane	10	ND
VS10	Chloroethane	10	ND
VS11	Trichlorofluoromethane	10	ND
VS12	Acetone	100	ND
VS13	1,1-Dichloroethene	5	ND
VS14	Carbondisulfide	5	ND
VS15	Methylene Chloride	5	ND
VS16	Methyl-t-Butylether (MTBE)	---	ND
VS17	1,2-Dichloroethene	5	ND
VS18	1,1-Dichloroethane	5	ND
VS19	Vinyl Acetate	50	ND
VS20	2-Butanone	100	ND
VS21	Chloroform	5	ND
VS22	1,1,1-Trichloroethane	5	ND
VS23	Carbon Tetrachloride	5	ND
VS24	Benzene	5	ND
VS25	1,2-Dichlorethane	5	ND
VS26	Trichloroethene	5	ND
VS27	1,2-Dichloropropane	5	ND
VS28	Bromodichloromethane	5	ND
VS29	4-Methyl-2-Pentanone	50	ND
VS30	Cis-1,3-Dichloropropene	5	ND
VS31	Toluene	5	ND
VS32	Trans-1,3-Dichloropropene	5	ND
VS33	1,1,2-Trichloroethane	5	ND
VS34	2-Hexanone	50	ND
VS35	Tetrachloroethene	5	ND
VS36	Dibromochloromethane	5	ND
VS37	Chlorobenzene	5	ND
VS38	Ethylbenzene	5	ND
VS39	Xylenes	5	ND
VS40	Styrene	5	ND
VS41	Bromoform	5	ND
VS42	1,1,2,2,-Tetrachloroethane	5	ND

REMARKS.....

GD\180-LOW

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR METHOD 8240 GC/MS FOR VOLATILE ORGANICS - **SOILS**

SAMPLE NUMBER: 58628 ANALYST: SRL REMARKS CODE 824S: Z
DATE RUN: 09-20-90 SAMPLE WT: 1.9g
SITE: SB-6 METHOD: Heated Purge

		Practical Quant. Limits Low-Level Soil (EPA)	TEST RESULTS ug/kg
VS07	Vinylchloride	10	ND
VS08	Chloromethane	10	ND
VS09	Bromomethane	10	ND
VS10	Chloroethane	10	ND
VS11	Trichlorofluoromethane	10	ND
VS12	Acetone	100	ND
VS13	1,1-Dichloroethene	5	ND
VS14	Carbondisulfide	5	ND
VS15	Methylene Chloride	5	ND
VS16	Methyl-t-Butylether (MTBE)	---	ND
VS17	1,2-Dichloroethene	5	ND
VS18	1,1-Dichloroethane	5	ND
VS19	Vinyl Acetate	50	ND
VS20	2-Butanone	100	ND
VS21	Chloroform	5	ND
VS22	1,1,1-Trichloroethane	5	ND
VS23	Carbon Tetrachloride	5	ND
VS24	Benzene	5	ND
VS25	1,2-Dichlorethane	5	ND
VS26	Trichloroethene	5	ND
VS27	1,2-Dichloropropane	5	ND
VS28	Bromodichloromethane	5	ND
VS29	4-Methyl-2-Pentanone	50	ND
VS30	Cis-1,3-Dichloropropene	5	ND
VS31	Toluene	5	ND
VS32	Trans-1,3-Dichloropropene	5	ND
VS33	1,1,2-Trichloroethane	5	ND
VS34	2-Hexanone	50	ND
VS35	Tetrachloroethene	5	ND
VS36	Dibromochloromethane	5	ND
VS37	Chlorobenzene	5	ND
VS38	Ethylbenzene	5	ND
VS39	Xylenes	5	ND
VS40	Styrene	5	ND
VS41	Bromoform	5	ND
VS42	1,1,2,2,-Tetrachloroethane	5	ND

REMARKS.....

GD\180-LOW

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY

DEC 03 1990

DATA SHEET FOR METHOD 8240 GC/MS FOR VOLATILE ORGANICS - **SOILS**

SAMPLE NUMBER: 58629 ANALYST: SRL REMARKS CODE 824S: T

DATE RUN: 11-20-90 SAMPLE WT: 4.1g

SITE: SB-7 METHOD: Methanol Extraction

		Practical Quant. Limits High-Level Soil (EPA) ug/kg	TEST RESULTS ug/kg
VS07	Vinylchloride	1250	ND
VS08	Chloromethane	1250	ND
VS09	Bromomethane	1250	ND
VS10	Chloroethane	1250	ND
VS11	Trichlorofluoromethane	1250	ND
VS12	Acetone	12500	ND
VS13	1,1-Dichloroethene	625	ND
VS14	Carbondisulfide	625	ND
VS15	Methylene Chloride	625	ND
VS16	Methyl-t-Butylether (MTBE)	---	ND
VS17	1,2-Dichloroethene	625	ND
VS18	1,1-Dichloroethane	625	ND
VS19	Vinyl Acetate	6250	ND
VS20	2-Butanone	12500	25600
VS21	Chloroform	625	ND
VS22	1,1,1-Trichloroethane	625	ND
VS23	Carbon Tetrachloride	625	ND
VS24	Benzene	625	ND
VS25	1,2-Dichlorethane	625	ND
VS26	Trichloroethene	625	ND
VS27	1,2-Dichloropropane	625	ND
VS28	Bromodichloromethane	625	ND
VS29	4-Methyl-2-Pentanone	6250	ND
VS30	Cis-1,3-Dichloropropene	625	ND
VS31	Toluene	625	ND
VS32	Trans-1,3-Dichloropropene	625	ND
VS33	1,1,2-Trichloroethane	625	ND
VS34	2-Hexanone	6250	ND
VS35	Tetrachloroethene	625	ND
VS36	Dibromochloromethane	625	ND
VS37	Chlorobenzene	625	ND
VS38	Ethylbenzene	625	ND
VS39	Xylenes	625	ND
VS40	Styrene	625	ND
VS41	Bromoform	625	ND
VS42	1,1,2,2,-Tetrachloroethane	625	ND

REMARKS.....

GC-MS tentatively identified higher boiling alkanes and cumenes. TVH based on hexane is 112000 ug/kg.

GD\180-1222

DEC 03 1990

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY

DATA SHEET FOR METHOD 8240 GC/MS FOR VOLATILE ORGANICS - **SOILS**

SAMPLE NUMBER: 58630 ANALYST: SRL REMARKS CODE 824S: Z

DATE RUN: 11-20-90 SAMPLE WT: 1.3 g

SITE: SB-8 METHOD: Heated Purge

		Practical Quant. Limits Low-Level Soil (EPA)	TEST RESULTS ug/kg
VS07	Vinylchloride	10	ND
VS08	Chloromethane	10	ND
VS09	Bromomethane	10	ND
VS10	Chloroethane	10	ND
VS11	Trichlorofluoromethane	10	ND
VS12	Acetone	100	ND
VS13	1,1-Dichloroethene	5	ND
VS14	Carbondisulfide	5	ND
VS15	Methylene Chloride	5	ND
VS16	Methyl-t-Butylether (MTBE)	---	ND
VS17	1,2-Dichloroethene	5	ND
VS18	1,1-Dichloroethane	5	ND
VS19	Vinyl Acetate	50	ND
VS20	2-Butanone	100	ND
VS21	Chloroform	5	ND
VS22	1,1,1-Trichloroethane	5	ND
VS23	Carbon Tetrachloride	5	ND
VS24	Benzene	5	ND
VS25	1,2-Dichlorethane	5	ND
VS26	Trichloroethene	5	ND
VS27	1,2-Dichloropropane	5	ND
VS28	Bromodichloromethane	5	ND
VS29	4-Methyl-2-Pentanone	50	ND
VS30	Cis-1,3-Dichloropropene	5	ND
VS31	Toluene	5	ND
VS32	Trans-1,3-Dichloropropene	5	ND
VS33	1,1,2-Trichloroethane	5	ND
VS34	2-Hexanone	50	ND
VS35	Tetrachloroethene	5	ND
VS36	Dibromochloromethane	5	ND
VS37	Chlorobenzene	5	ND
VS38	Ethylbenzene	5	ND
VS39	Xylenes	5	ND
VS40	Styrene	5	ND
VS41	Bromoform	5	ND
VS42	1,1,2,2,-Tetrachloroethane	5	ND

REMARKS.....

GD\180-LOW

Old Montpelier Stump Dump
Site Investigation
Laboratory Analysis Reports
Soils-SVOC's

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58624
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 14,1990
DATE RUN	November 28,1990
DILUTION FACTOR	100.0
SAMPLE SITE	SB-1 10.0 grams
PERCENT MOISTURE	38%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	500	N.D.
Aniline	500	N.D.
Phenol	500	N.D.
Bis(2-Chloroethyl)Ether	500	N.D.
2-Chlorophenol	1000	N.D.
1,3-Dichlorobenzene	500	N.D.
1,4-Dichlorobenzene	500	N.D.
1,2-Dichlorobenzene	500	N.D.
Benzylalcohol	1000	N.D.
2-Methylphenol	500	N.D.
Bis(2-Chloroisopropyl)Ether	500	N.D.
Hexachloroethane	500	N.D.
4-Methylphenol	500	N.D.
N-Nitroso-Di-n-Propylamine	500	N.D.
Nitrobenzene	500	N.D.
Isophorone	500	N.D.
2-Nitrophenol	1000	N.D.
2,4-Dimethylphenol	500	N.D.
Bis(2-Chloroethoxy)Methane	500	N.D.
2,4-Dichlorophenol	1000	N.D.
1,2,4-Trichlorobenzene	500	N.D.
Naphthalene	500	N.D.
Benzoic Acid	5000	N.D.
4-Chloroaniline	500	N.D.
Hexachlorobutadiene	500	N.D.
4-Chloro-3-Methylphenol	1000	N.D.
2-Methylnaphthalene	500	N.D.
Hexachlorocyclopentadiene	500	N.D.
2,4,6-Trichlorophenol	1000	N.D.
2,4,5-Trichlorophenol	1000	N.D.
2-Chloronaphthlene	500	N.D.
2-Nitroaniline	2000	N.D.
Acenaphthylene	500	N.D.
Dimethylphthalate	1000	N.D.
2,6-Dinitrotoluene	1000	N.D.
Acenaphthene	500	N.D.
3-Nitroaniline	5000	N.D.
2,4-Dinitrophenol	5000	N.D.
Dibenzofuran	500	N.D.

2,4-Dinitrotoluene	1000	N.D.
4-Nitrophenol	5000	N.D.
Fluorene	500	N.D.
4-ChlorophenylPhenyl Ether	500	N.D.
Diethylphthalate	1000	N.D.
4-Nitroaniline	5000	N.D.
4,6-Dinitro-2-Methylphenol	5000	N.D.
N-Nitrosodiphenylamine	500	N.D.
Azobenzene	500	N.D.
4-BromophenylPhenyl Ether	500	N.D.
Hexachlorobenzene	500	N.D.
Pentachlorophenol	2000	N.D.
Phenanthrene	500	N.D.
Anthracene	500	N.D.
Di-n-Butyl Phthalate	1000	N.D.
Fluoranthene	500	N.D.
Pyrene	500	N.D.
Butylbenzylphthalate	1000	N.D.
Benzo[a]anthracene	500	N.D.
Chrysene	500	N.D.
3,3-Dichlorobenzadine	5000	N.D.
Bis(2-ethylhexyl)Phthalate	1000	N.D.
Benzo[b]fluoranthene	500	N.D.
Benzo[k]fluoranthene	500	N.D.
Di-n-Octylphthalate	500	N.D.
Benzo[a]pyrene	500	N.D.
Indeno[1,2,3,cd]anthracene	500	N.D.
Dibenz[a,h]anthracene	500	N.D.
Benzo[g,h,i]perylene	500	N.D.
*Cumene isomers	500	N.D.
*C-4 alkylBenzene isomers	500	N.D.
*1-Methylnaphthalene	500	N.D.
*Dimethylnaphthalene isomer	500	N.D.
*Trimethylnaphthalene isome	500	N.D.

GC/MS detected large number of high boiling unknowns.
These may be unsaturated hydrocarbons (i.e. olefins or cyclic alkanes)

* These are estimated using the response factors of
xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	43 %
Phenol-D6	52 %
Nitrobenzene-D5	14 %
2-Fluorobiphenyl	65 %
2,3,6-Tribromophenol	88 %
4-Terphenyl-D14	101 %

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58625
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 14,1990
DATE RUN	November 28,1990
DILUTION FACTOR	75.0
SAMPLE SITE	SB-2 13.36 grams
PERCENT MOISTURE	21%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	375	N.D.
Aniline	375	N.D.
Phenol	375	N.D.
Bis(2-Chloroethyl)Ether	375	N.D.
2-Chlorophenol	90	N.D.
1,3-Dichlorobenzene	375	N.D.
1,4-Dichlorobenzene	375	N.D.
1,2-Dichlorobenzene	375	N.D.
Benzylalcohol	750	N.D.
2-Methylphenol	375	N.D.
Bis(2-Chloroisopropyl)Ether	375	N.D.
Hexachloroethane	375	N.D.
4-Methylphenol	375	3800
N-Nitroso-Di-n-Propylamine	375	N.D.
Nitrobenzene	375	N.D.
Isophorone	375	N.D.
2-Nitrophenol	750	N.D.
2,4-Dimethylphenol	375	N.D.
Bis(2-Chloroethoxy)Methane	375	N.D.
2,4-Dichlorophenol	750	N.D.
1,2,4-Trichlorobenzene	375	N.D.
Naphthalene	375	150
Benzoic Acid	3750	N.D.
4-Chloroaniline	375	N.D.
Hexachlorobutadiene	375	N.D.
4-Chloro-3-Methylphenol	750	N.D.
2-Methylnaphthalene	375	100
Hexachlorocyclopentadiene	375	N.D.
2,4,6-Trichlorophenol	750	N.D.
2,4,5-Trichlorophenol	750	N.D.
2-Chloronaphthlene	375	N.D.
2-Nitroaniline	1500	N.D.
Acenaphthylene	375	350
Dimethylphthalate	750	N.D.
2,6-Dinitrotoluene	750	N.D.
Acenaphthene	375	200
3-Nitroaniline	3750	N.D.
2,4-Dinitrophenol	3750	N.D.
Dibenzofuran	375	200

2,4-Dinitrotoluene	750	N.D.
4-Nitrophenol	3750	N.D.
Fluorene	375	440
4-ChlorophenylPhenyl Ether	375	N.D.
Diethylphthalate	750	N.D.
4-Nitroaniline	3750	N.D.
4,6-Dinitro-2-Methylphenol	3750	N.D.
N-Nitrosodiphenylamine	375	N.D.
Azobenzene	375	N.D.
4-BromophenylPhenyl Ether	375	N.D.
Hexachlorobenzene	375	N.D.
Pentachlorophenol	1500	N.D.
Phenanthrene	375	4000
Anthracene	375	720
Di-n-Butyl Phthalate	750	N.D.
Fluoranthene	375	5300
Pyrene	375	4800
Butylbenzylphthalate	750	N.D.
Benzo[a]anthracene	375	1900
Chrysene	375	1900
3,3-Dichlorobenzadine	3750	N.D.
Bis(2-ethylhexyl)Phthalate	750	N.D.
Benzo[b]fluoranthene	375	2200
Benzo[k]fluoranthene	375	1600
Di-n-Octylphthalate	375	N.D.
Benzo[a]pyrene	375	2000
Indeno[1,2,3,cd]anthracene	375	1200
Dibenz[a,h]anthracene	375	200
Benzo[g,h,i]perylene	375	900

*Cumene isomers	375	N.D.
*C-4 alkylBenzene isomers	375	400
*1-Methylnaphthalene	375	200
*Dimethylnaphthalene isomer	375	500
*Trimethylnaphthalene isome	375	700

GC/MS also detected Several Fatty Acids such as Steric acid.
Also various alkanes ranging from C10 to C20 alkanes, Benzenepropanoic acid, Mehtyl Indole, Sulfur, Nonyl Phenols, and traces of Polynuclear aromatics not listed in the list above. Also various unknowns .

* These are estimated using the response factors of
xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	61 %
Phenol-D6	81 %
Nitrobenzene-D5	57 %
2-Fluorobiphenyl	80 %
2,3,6-Tribromophenol	100 %
4-Terphenyl-D14	106 %

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58626
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 14,1990
DATE RUN	November 28,1990
DILUTION FACTOR	81.0
SAMPLE SITE	SB-3 12.32 grams
PERCENT MOISTURE	25%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	405	N.D.
Aniline	405	N.D.
Phenol	405	N.D.
Bis(2-Chloroethyl)Ether	405	N.D.
2-Chlorophenol	810	N.D.
1,3-Dichlorobenzene	405	N.D.
1,4-Dichlorobenzene	405	N.D.
1,2-Dichlorobenzene	405	N.D.
Benzylalcohol	810	N.D.
2-Methylphenol	405	N.D.
Bis(2-Chloroisopropyl)Ether	405	N.D.
Hexachloroethane	405	N.D.
4-Methylphenol	405	N.D.
N-Nitroso-Di-n-Propylamine	405	N.D.
Nitrobenzene	405	N.D.
Isophorone	405	N.D.
2-Nitrophenol	810	N.D.
2,4-Dimethylphenol	405	N.D.
Bis(2-Chloroethoxy)Methane	405	N.D.
2,4-Dichlorophenol	810	N.D.
1,2,4-Trichlorobenzene	405	N.D.
Naphthalene	405	380
Benzoic Acid	4050	N.D.
4-Chloroaniline	405	N.D.
Hexachlorobutadiene	405	N.D.
4-Chloro-3-Methylphenol	810	N.D.
2-Methylnaphthalene	405	440
Hexachlorocyclopentadiene	405	N.D.
2,4,6-Trichlorophenol	810	N.D.
2,4,5-Trichlorophenol	810	N.D.
2-Chloronaphthlene	405	N.D.
2-Nitroaniline	1620	N.D.
Acenaphthylene	405	150
Dimethylphthalate	810	N.D.
2,6-Dinitrotoluene	810	N.D.
Acenaphthene	405	650
3-Nitroaniline	4050	N.D.
2,4-Dinitrophenol	4050	N.D.
Dibenzofuran	405	650

2,4-Dinitrotoluene	810	N.D.
4-Nitrophenol	4050	N.D.
Fluorene	405	1200
4-ChlorophenylPhenyl Ether	405	N.D.
Diethylphthalate	810	N.D.
4-Nitroaniline	4050	N.D.
4,6-Dinitro-2-Methylphenol	4050	N.D.
N-Nitrosodiphenylamine	405	N.D.
Azobenzene	405	N.D.
4-BromophenylPhenyl Ether	405	N.D.
Hexachlorobenzene	405	N.D.
Pentachlorophenol	1620	N.D.
Phenanthrene	405	4500
Anthracene	405	1100
Di-n-Butyl Phthalate	810	N.D.
Fluoranthene	405	3900
Pyrene	405	3500
Butylbenzylphthalate	810	N.D.
Benzo[a]anthracene	405	2400
Chrysene	405	3400
3,3-Dichlorobenzadine	4050	N.D.
Bis(2-ethylhexyl)Phthalate	810	N.D.
Benzo[b]fluoranthene	405	4000
Benzo[k]fluoranthene	405	3900
Di-n-Octylphthalate	405	N.D.
Benzo[a]pyrene	405	3200
Indeno[1,2,3,cd]anthracene	405	2300
Dibenz[a,h]anthracene	405	N.D.
Benzo[g,h,i]perylene	405	2700

*Cumene isomers	405	N.D.
*C-4 alkylBenzene isomers	405	890
*1-Methylnaphthalene	405	290
*Dimethylnaphthalene isomer	405	800
*Trimethylnaphthalene isome	405	800

GC/MS also detected a large set of compounds almost identical in distribution to that found in SB-1 . Also detected various alkanes ranging from C10 to C20 alkanes.

* These are estimated using the response factors of xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	50 %
Phenol-D6	60 %
Nitrobenzene-D5	37 %
2-Fluorobiphenyl	49 %
2,3,6-Tribromophenol	51 %
4-Terphenyl-D14	79 %

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER 58629
DATE COLLECTED November 8,1990
DATE EXTRACTED November 19,1990
DATE RUN November 28,1990
DILUTION FACTOR 85.0
SAMPLE SITE SB-7 11.7 grams
PERCENT MOISTURE 14%
11.7 grams extracted with 10 grams of duplicate spiked with five acid compounds below.

	Approximate Detection limit ug/Kg	detected ug/Kg	Percent Recoveries
N-Nitrosodimethylamine	425	N.D.	
Aniline	425	N.D.	
Phenol	425	N.D.	58%
Bis(2-Chloroethyl)Ether	425	N.D.	
2-Chlorophenol	90	N.D.	58%
1,3-Dichlorobenzene	425	N.D.	
1,4-Dichlorobenzene	425	N.D.	
1,2-Dichlorobenzene	425	N.D.	
Benzylalcohol	850	N.D.	
2-Methylphenol	425	N.D.	
Bis(2-Chloroisopropyl)Ether	425	N.D.	
Hexachloroethane	425	N.D.	
4-Methylphenol	425	N.D.	
N-Nitroso-Di-n-Propylamine	425	N.D.	
Nitrobenzene	425	N.D.	
Isophorone	425	N.D.	
2-Nitrophenol	850	N.D.	
2,4-Dimethylphenol	425	N.D.	
Bis(2-Chloroethoxy)Methane	425	N.D.	
2,4-Dichlorophenol	850	N.D.	
1,2,4-Trichlorobenzene	425	N.D.	
Naphthalene	425	1700 and 2400	
Benzoic Acid	4250	N.D.	
4-Chloroaniline	425	N.D.	
Hexachlorobutadiene	425	N.D.	
4-Chloro-3-Methylphenol	850	N.D.	37%
2-Methylnaphthalene	425	3000 and 3200	
Hexachlorocyclopentadiene	425	N.D.	
2,4,6-Trichlorophenol	850	N.D.	
2,4,5-Trichlorophenol	850	N.D.	
2-Chloronaphthlene	425	N.D.	
2-Nitroaniline	1700	N.D.	
Acenaphthylene	425	320 and 330	
Dimethylphthalate	850	N.D.	
2,6-Dinitrotoluene	850	N.D.	
Acenaphthene	425	70 and 100	
3-Nitroaniline	4250	N.D.	
2,4-Dinitrophenol	4250	N.D.	
Dibenzofuran	425	130 and 150	

2,4-Dinitrotoluene	850	N.D.	
4-Nitrophenol	4250	N.D.	71%
Fluorene	425	220 and 260	
4-ChlorophenylPhenyl Ether	425	N.D.	
Diethylphthalate	850	N.D.	
4-Nitroaniline	4250	N.D.	
4,6-Dinitro-2-Methylphenol	4250	N.D.	
N-Nitrosodiphenylamine	425	N.D.	
Azobenzene	425	N.D.	
4-BromophenylPhenyl Ether	425	N.D.	
Hexachlorobenzene	425	N.D.	
Pentachlorophenol	1700	N.D.	76%
Phenanthrene	425	850 and 860	
Anthracene	425	230 and 220	
Di-n-Butyl Phthalate	850	N.D.	
Fluoranthene	425	1600 and 2200	
Pyrene	425	1600 and 2400	
Butylbenzylphthalate	850	N.D.	
Benzo[a]anthracene	425	660 and 820	
Chrysene	425	570 and 680	
3,3-Dichlorobenzadine	4250	N.D.	
Bis(2-ethylhexyl)Phthalate	850	N.D.	
Benzo[b]fluoranthene	425	530 and 940	
Benzo[k]fluoranthene	425	570 and 680	
Di-n-Octylphthalate	425	N.D.	
Benzo[a]pyrene	425	540 and 610	
Indeno[1,2,3,cd]anthracene	425	650 and 790	
Dibenz[a,h]anthracene	425	140 and 260	
Benzo[g,h,i]perylene	425	480 and 770	

*Cumene isomers	425	14600 and 20700
*C-4 alkylBenzene isomers	425	25200 and 26700
*1-Methylnaphthalene	425	1700 and 2100
*Dimethylnaphthalene isomer	425	1700 and 1900
*Trimethylnaphthalene isome	425	550 and 900

GC/MS also detected various alkyl substituted benzenes and polynuclear aromatics not listed above. Also various high boiling unknowns similar to those found in SB-1

* These are estimated using the response factors of xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	14 %
Phenol-D6	44 %
Nitrobenzene-D5	70 %
2-Fluorobiphenyl	78 %
2,3,6-Tribromophenol	30 %
4-Terphenyl-D14	116 %

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58630
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 19,1990
DATE RUN	November 28,1990
DILUTION FACTOR	100.0
SAMPLE SITE	SB-8 10.2 grams
PERCENT MOISTURE	23%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	500	N.D.
Aniline	500	N.D.
Phenol	500	N.D.
Bis(2-Chloroethyl)Ether	500	N.D.
2-Chlorophenol	1000	N.D.
1,3-Dichlorobenzene	500	N.D.
1,4-Dichlorobenzene	500	N.D.
1,2-Dichlorobenzene	500	N.D.
Benzylalcohol	1000	N.D.
2-Methylphenol	500	N.D.
Bis(2-Chloroisopropyl)Ether	500	N.D.
Hexachloroethane	500	N.D.
4-Methylphenol	500	N.D.
N-Nitroso-Di-n-Propylamine	500	N.D.
Nitrobenzene	500	N.D.
Isophorone	500	N.D.
2-Nitrophenol	1000	N.D.
2,4-Dimethylphenol	500	N.D.
Bis(2-Chloroethoxy)Methane	500	N.D.
2,4-Dichlorophenol	1000	N.D.
1,2,4-Trichlorobenzene	500	N.D.
Naphthalene	500	N.D.
Benzoic Acid	5000	N.D.
4-Chloroaniline	500	N.D.
Hexachlorobutadiene	500	N.D.
4-Chloro-3-Methylphenol	1000	N.D.
2-Methylnaphthalene	500	N.D.
Hexachlorocyclopentadiene	500	N.D.
2,4,6-Trichlorophenol	1000	N.D.
2,4,5-Trichlorophenol	1000	N.D.
2-Chloronaphthlene	500	N.D.
2-Nitroaniline	2000	N.D.
Acenaphthylene	500	N.D.
Dimethylphthalate	1000	N.D.
2,6-Dinitrotoluene	1000	N.D.
Acenaphthene	500	N.D.
3-Nitroaniline	5000	N.D.
2,4-Dinitrophenol	5000	N.D.
Dibenzofuran	500	N.D.

2,4-Dinitrotoluene	1000	N.D.
4-Nitrophenol	5000	N.D.
Fluorene	500	N.D.
4-ChlorophenylPhenyl Ether	500	N.D.
Diethylphthalate	1000	N.D.
4-Nitroaniline	5000	N.D.
4,6-Dinitro-2-Methylphenol	5000	N.D.
N-Nitrosodiphenylamine	500	N.D.
Azobenzene	500	N.D.
4-BromophenylPhenyl Ether	500	N.D.
Hexachlorobenzene	500	N.D.
Pentachlorophenol	2000	N.D.
Phenanthrene	500	N.D.
Anthracene	500	N.D.
Di-n-Butyl Phthalate	1000	N.D.
Fluoranthene	500	N.D.
Pyrene	500	N.D.
Butylbenzylphthalate	1000	N.D.
Benzo[a]anthracene	500	N.D.
Chrysene	500	N.D.
3,3-Dichlorobenzadine	5000	N.D.
Bis(2-ethylhexyl)Phthalate	1000	N.D.
Benzo[b]fluoranthene	500	N.D.
Benzo[k]fluoranthene	500	N.D.
Di-n-Octylphthalate	500	N.D.
Benzo[a]pyrene	500	N.D.
Indeno[1,2,3,cd]anthracene	500	N.D.
Dibenz[a,h]anthracene	500	N.D.
Benzo[g,h,i]perylene	500	N.D.
*Cumene isomers	500	N.D.
*C-4 alkylBenzene isomers	500	N.D.
*1-Methylnaphthalene	500	N.D.
*Dimethylnaphthalene isomer	500	N.D.
*Trimethylnaphthalene isome	500	N.D.

* These are estimated using the response factors of
xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	26 %
Phenol-D6	48 %
Nitrobenzene-D5	48 %
2-Fluorobiphenyl	92 %
2,3,6-Tribromophenol	66 %
4-Terphenyl-D14	114 %

Old Montpelier Stump Dump
Site Investigation
Laboratory Analysis Reports
Sediments-SVOC's

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58627
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 19,1990
DATE RUN	November 28,1990
DILUTION FACTOR	72.0
SAMPLE SITE	SB-4 13.8 grams
PERCENT MOISTURE	21%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	360	N.D.
Aniline	360	N.D.
Phenol	360	N.D.
Bis(2-Chloroethyl)Ether	360	N.D.
2-Chlorophenol	720	N.D.
1,3-Dichlorobenzene	360	N.D.
1,4-Dichlorobenzene	360	N.D.
1,2-Dichlorobenzene	360	N.D.
Benzylalcohol	720	N.D.
2-Methylphenol	360	N.D.
Bis(2-Chloroisopropyl)Ether	360	N.D.
Hexachloroethane	360	N.D.
4-Methylphenol	360	N.D.
N-Nitroso-Di-n-Propylamine	360	N.D.
Nitrobenzene	360	N.D.
Isophorone	360	N.D.
2-Nitrophenol	720	N.D.
2,4-Dimethylphenol	360	N.D.
Bis(2-Chloroethoxy)Methane	360	N.D.
2,4-Dichlorophenol	720	N.D.
1,2,4-Trichlorobenzene	360	N.D.
Naphthalene	360	N.D.
Benzoic Acid	3600	N.D.
4-Chloroaniline	360	N.D.
Hexachlorobutadiene	360	N.D.
4-Chloro-3-Methylphenol	720	N.D.
2-Methylnaphthalene	360	N.D.
Hexachlorocyclopentadiene	360	N.D.
2,4,6-Trichlorophenol	720	N.D.
2,4,5-Trichlorophenol	720	N.D.
2-Chloronaphthlene	360	N.D.
2-Nitroaniline	1440	N.D.
Acenaphthylene	360	N.D.
Dimethylphthalate	720	N.D.
2,6-Dinitrotoluene	720	N.D.
Acenaphthene	360	N.D.
3-Nitroaniline	3600	N.D.
2,4-Dinitrophenol	3600	N.D.
Dibenzofuran	360	N.D.

2,4-Dinitrotoluene	720	N.D.
4-Nitrophenol	3600	N.D.
Fluorene	360	N.D.
4-ChlorophenylPhenyl Ether	360	N.D.
Diethylphthalate	720	N.D.
4-Nitroaniline	3600	N.D.
4,6-Dinitro-2-Methylphenol	3600	N.D.
N-Nitrosodiphenylamine	360	N.D.
Azobenzene	360	N.D.
4-BromophenylPhenyl Ether	360	N.D.
Hexachlorobenzene	360	N.D.
Pentachlorophenol	1440	N.D.
Phenanthrene	360	N.D.
Anthracene	360	N.D.
Di-n-Butyl Phthalate	720	N.D.
Fluoranthene	360	N.D.
Pyrene	360	N.D.
Butylbenzylphthalate	720	N.D.
Benzo[a]anthracene	360	N.D.
Chrysene	360	N.D.
3,3-Dichlorobenzadine	3600	N.D.
Bis(2-ethylhexyl)Phthalate	720	N.D.
Benzo[b]fluoranthene	360	N.D.
Benzo[k]fluoranthene	360	N.D.
Di-n-Octylphthalate	360	N.D.
Benzo[a]pyrene	360	N.D.
Indeno[1,2,3,cd]anthracene	360	N.D.
Dibenz[a,h]anthracene	360	N.D.
Benzo[g,h,i]perylene	360	N.D.
*Cumene isomers	360	N.D.
*C-4 alkylBenzene isomers	360	N.D.
*1-Methylnaphthalene	360	N.D.
*Dimethylnaphthalene isomer	360	N.D.
*Trimethylnaphthalene isome	360	N.D.

* These are estimated using the response factors of
xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	27 %
Phenol-D6	35 %
Nitrobenzene-D5	22 %
2-Fluorobiphenyl	54 %
2,3,6-Tribromophenol	92 %
4-Terphenyl-D14	43 %

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58628
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 15,1990
DATE RUN	November 28,1990
DILUTION FACTOR	100.0
SAMPLE SITE	SB-6 11.7 grams
PERCENT MOISTURE	19%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	500	N.D.
Aniline	500	N.D.
Phenol	500	N.D.
Bis(2-Chloroethyl)Ether	500	N.D.
2-Chlorophenol	1000	N.D.
1,3-Dichlorobenzene	500	N.D.
1,4-Dichlorobenzene	500	N.D.
1,2-Dichlorobenzene	500	N.D.
Benzylalcohol	1000	N.D.
2-Methylphenol	500	N.D.
Bis(2-Chloroisopropyl)Ether	500	N.D.
Hexachloroethane	500	N.D.
4-Methylphenol	500	N.D.
N-Nitroso-Di-n-Propylamine	500	N.D.
Nitrobenzene	500	N.D.
Isophorone	500	N.D.
2-Nitrophenol	1000	N.D.
2,4-Dimethylphenol	500	N.D.
Bis(2-Chloroethoxy)Methane	500	N.D.
2,4-Dichlorophenol	1000	N.D.
1,2,4-Trichlorobenzene	500	N.D.
Naphthalene	500	390
Benzoic Acid	5000	N.D.
4-Chloroaniline	500	N.D.
Hexachlorobutadiene	500	N.D.
4-Chloro-3-Methylphenol	1000	N.D.
2-Methylnaphthalene	500	200
Hexachlorocyclopentadiene	500	N.D.
2,4,6-Trichlorophenol	1000	N.D.
2,4,5-Trichlorophenol	1000	N.D.
2-Chloronaphthlene	500	N.D.
2-Nitroaniline	2000	N.D.
Acenaphthylene	500	540
Dimethylphthalate	1000	N.D.
2,6-Dinitrotoluene	1000	N.D.
Acenaphthene	500	180
3-Nitroaniline	5000	N.D.
2,4-Dinitrophenol	5000	N.D.
Dibenzofuran	500	260

2,4-Dinitrotoluene	1000	N.D.
4-Nitrophenol	5000	N.D.
Fluorene	500	300
4-ChlorophenylPhenyl Ether	500	N.D.
Diethylphthalate	1000	N.D.
4-Nitroaniline	5000	N.D.
4,6-Dinitro-2-Methylphenol	5000	N.D.
N-Nitrosodiphenylamine	500	N.D.
Azobenzene	500	N.D.
4-BromophenylPhenyl Ether	500	N.D.
Hexachlorobenzene	500	N.D.
Pentachlorophenol	2000	N.D.
Phenanthrene	500	3200
Anthracene	500	700
Di-n-Butyl Phthalate	1000	N.D.
Fluoranthene	500	4600
Pyrene	500	4100
Butylbenzylphthalate	1000	N.D.
Benzo[a]anthracene	500	3000
Chrysene	500	3100
3,3-Dichlorobenzadine	5000	N.D.
Bis(2-ethylhexyl)Phthalate	1000	N.D.
Benzo[b]fluoranthene	500	3000
Benzo[k]fluoranthene	500	2500
Di-n-Octylphthalate	500	N.D.
Benzo[a]pyrene	500	3400
Indeno[1,2,3,cd]anthracene	500	5300
Dibenz[a,h]anthracene	500	560
Benzo[g,h,i]perylene	500	6000

*Cumene isomers	500	N.D.
*C-4 alkylBenzene isomers	500	N.D.
*1-Methylnaphthalene	500	120
*Dimethylnaphthalene isomer	500	480
*Trimethylnaphthalene isome	500	620

GC/MS also detected traces of Polynuclear aromatics not in the list above. Also various unknowns.

* These are estimated using the response factors of xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	74 %
Phenol-D6	89 %
Nitrobenzene-D5	67 %
2-Fluorobiphenyl	102 %
2,3,6-Tribromophenol	146 %
4-Terphenyl-D14	116 %

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58635
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 14,1990
DATE RUN	November 28,1990
DILUTION FACTOR	80.0
SAMPLE SITE	SD-1 12.21 grams
PERCENT MOISTURE	24%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	400	N.D.
Aniline	400	N.D.
Phenol	400	N.D.
Bis(2-Chloroethyl)Ether	400	N.D.
2-Chlorophenol	800	N.D.
1,3-Dichlorobenzene	400	N.D.
1,4-Dichlorobenzene	400	N.D.
1,2-Dichlorobenzene	400	N.D.
Benzylalcohol	800	N.D.
2-Methylphenol	400	N.D.
Bis(2-Chloroisopropyl)Ether	400	N.D.
Hexachloroethane	400	N.D.
4-Methylphenol	400	N.D.
N-Nitroso-Di-n-Propylamine	400	N.D.
Nitrobenzene	400	N.D.
Isophorone	400	N.D.
2-Nitrophenol	800	N.D.
2,4-Dimethylphenol	400	N.D.
Bis(2-Chloroethoxy)Methane	400	N.D.
2,4-Dichlorophenol	800	N.D.
1,2,4-Trichlorobenzene	400	N.D.
Naphthalene	400	possible trace
Benzoic Acid	4000	N.D.
4-Chloroaniline	400	N.D.
Hexachlorobutadiene	400	N.D.
4-Chloro-3-Methylphenol	800	N.D.
2-Methylnaphthalene	400	N.D.
Hexachlorocyclopentadiene	400	N.D.
2,4,6-Trichlorophenol	800	N.D.
2,4,5-Trichlorophenol	800	N.D.
2-Chloronaphthlene	400	N.D.
2-Nitroaniline	1600	N.D.
Acenaphthylene	400	360
Dimethylphthalate	800	N.D.
2,6-Dinitrotoluene	800	N.D.
Acenaphthene	400	50
3-Nitroaniline	4000	N.D.
2,4-Dinitrophenol	4000	N.D.
Dibenzofuran	400	100

2,4-Dinitrotoluene	800	N.D.
4-Nitrophenol	4000	N.D.
Fluorene	400	190
4-ChlorophenylPhenyl Ether	400	N.D.
Diethylphthalate	800	N.D.
4-Nitroaniline	4000	N.D.
4,6-Dinitro-2-Methylphenol	4000	N.D.
N-Nitrosodiphenylamine	400	N.D.
Azobenzene	400	N.D.
4-BromophenylPhenyl Ether	400	N.D.
Hexachlorobenzene	400	N.D.
Pentachlorophenol	1600	N.D.
Phenanthrene	400	2700
Anthracene	400	390
Di-n-Butyl Phthalate	800	N.D.
Fluoranthene	400	4500
Pyrene	400	4300
Butylbenzylphthalate	800	N.D.
Benzo[a]anthracene	400	1600
Chrysene	400	1600
3,3-Dichlorobenzadine	4000	N.D.
Bis(2-ethylhexyl)Phthalate	800	N.D.
Benzo[b]fluoranthene	400	1600
Benzo[k]fluoranthene	400	1400
Di-n-Octylphthalate	400	N.D.
Benzo[a]pyrene	400	1600
Indeno[1,2,3,cd]anthracene	400	1300
Dibenz[a,h]anthracene	400	220
Benzo[g,h,i]perylene	400	870
*Cumene isomers	400	N.D.
*C-4 alkylBenzene isomers	400	N.D.
*1-Methylnaphthalene	400	N.D.
*Dimethylnaphthalene isomer	400	N.D.
*Trimethylnaphthalene isome	400	N.D.

GC/MS also detected traces of polynuclear aromatics not listed above.

* These are estimated using the response factors of
xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	31 %
Phenol-D6	55 %
Nitrobenzene-D5	44 %
2-Fluorobiphenyl	82 %
2,3,6-Tribromophenol	86 %
4-Terphenyl-D14	124 %

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58636
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 14,1990
DATE RUN	November 28,1990
DILUTION FACTOR	55.0
SAMPLE SITE	SD-2 18.66grams
PERCENT MOISTURE	22%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	275	N.D.
Aniline	275	N.D.
Phenol	275	N.D.
Bis(2-Chloroethyl)Ether	275	N.D.
2-Chlorophenol	550	N.D.
1,3-Dichlorobenzene	275	N.D.
1,4-Dichlorobenzene	275	N.D.
1,2-Dichlorobenzene	275	N.D.
Benzylalcohol	550	N.D.
2-Methylphenol	275	N.D.
Bis(2-Chloroisopropyl)Ether	275	N.D.
Hexachloroethane	275	N.D.
4-Methylphenol	275	N.D.
N-Nitroso-Di-n-Propylamine	275	N.D.
Nitrobenzene	275	N.D.
Isophorone	275	N.D.
2-Nitrophenol	550	N.D.
2,4-Dimethylphenol	275	N.D.
Bis(2-Chloroethoxy)Methane	275	N.D.
2,4-Dichlorophenol	550	N.D.
1,2,4-Trichlorobenzene	275	N.D.
Naphthalene	275	N.D.
Benzoic Acid	2750	N.D.
4-Chloroaniline	275	N.D.
Hexachlorobutadiene	275	N.D.
4-Chloro-3-Methylphenol	550	N.D.
2-Methylnaphthalene	275	N.D.
Hexachlorocyclopentadiene	275	N.D.
2,4,6-Trichlorophenol	550	N.D.
2,4,5-Trichlorophenol	550	N.D.
2-Chloronaphthlene	275	N.D.
2-Nitroaniline	1100	N.D.
Acenaphthylene	275	Possible trace
Dimethylphthalate	550	N.D.
2,6-Dinitrotoluene	550	N.D.
Acenaphthene	275	N.D.
3-Nitroaniline	2750	N.D.
2,4-Dinitrophenol	2750	N.D.
Dibenzofuran	275	N.D.

2,4-Dinitrotoluene	550	N.D.
4-Nitrophenol	2750	N.D.
Fluorene	275	N.D.
4-ChlorophenylPhenyl Ether	275	N.D.
Diethylphthalate	550	N.D.
4-Nitroaniline	2750	N.D.
4,6-Dinitro-2-Methylphenol	2750	N.D.
N-Nitrosodiphenylamine	275	N.D.
Azobenzene	275	N.D.
4-BromophenylPhenyl Ether	275	N.D.
Hexachlorobenzene	275	N.D.
Pentachlorophenol	1100	N.D.
Phenanthrene	275	370
Anthracene	275	40
Di-n-Butyl Phthalate	550	N.D.
Fluoranthene	275	650
Pyrene	275	610
Butylbenzylphthalate	550	N.D.
Benzo[a]anthracene	275	240
Chrysene	275	240
3,3-Dichlorobenzadine	2750	N.D.
Bis(2-ethylhexyl)Phthalate	550	N.D.
Benzo[b]fluoranthene	275	280
Benzo[k]fluoranthene	275	250
Di-n-Octylphthalate	275	N.D.
Benzo[a]pyrene	275	190
Indeno[1,2,3,cd]anthracene	275	170
Dibenz[a,h]anthracene	275	N.D.
Benzo[g,h,i]perylene	275	130

*Cumene isomers	275	N.D.
*C-4 alkylBenzene isomers	275	N.D.
*1-Methylnaphthalene	275	N.D.
*Dimethylnaphthalene isomer	275	N.D.
*Trimethylnaphthalene isome	275	N.D.

GC/MS also detected traces of polynuclear aromatics not listed above.

* These are estimated using the response factors of xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	14 %
Phenol-D6	36 %
Nitrobenzene-D5	59 %
2-Fluorobiphenyl	70 %
2,3,6-Tribromophenol	59 %
4-Terphenyl-D14	100 %

DEC 13 1990

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58637
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 15,1990
DATE RUN	November 28,1990
DILUTION FACTOR	40.0
SAMPLE SITE	SD-3 23.2 grams
PERCENT MOISTURE	17%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	200	N.D.
Aniline	200	N.D.
Phenol	200	N.D.
Bis(2-Chloroethyl)Ether	200	N.D.
2-Chlorophenol	90	N.D.
1,3-Dichlorobenzene	200	N.D.
1,4-Dichlorobenzene	200	N.D.
1,2-Dichlorobenzene	200	N.D.
Benzylalcohol	400	N.D.
2-Methylphenol	200	N.D.
Bis(2-Chloroisopropyl)Ether	200	N.D.
Hexachloroethane	200	N.D.
4-Methylphenol	200	N.D.
N-Nitroso-Di-n-Propylamine	200	N.D.
Nitrobenzene	200	N.D.
Isophorone	200	N.D.
2-Nitrophenol	400	N.D.
2,4-Dimethylphenol	200	N.D.
Bis(2-Chloroethoxy)Methane	200	N.D.
2,4-Dichlorophenol	400	N.D.
1,2,4-Trichlorobenzene	200	N.D.
Naphthalene	200	N.D.
Benzoic Acid	2000	N.D.
4-Chloroaniline	200	N.D.
Hexachlorobutadiene	200	N.D.
4-Chloro-3-Methylphenol	400	N.D.
2-Methylnaphthalene	200	N.D.
Hexachlorocyclopentadiene	200	N.D.
2,4,6-Trichlorophenol	400	N.D.
2,4,5-Trichlorophenol	400	N.D.
2-Chloronaphthlene	200	N.D.
2-Nitroaniline	800	N.D.
Acenaphthylene	200	100
Dimethylphthalate	400	N.D.
2,6-Dinitrotoluene	400	N.D.
Acenaphthene	200	N.D.
3-Nitroaniline	2000	N.D.
2,4-Dinitrophenol	2000	N.D.
Dibenzofuran	200	N.D.

2,4-Dinitrotoluene	400	N.D.
4-Nitrophenol	2000	N.D.
Fluorene	200	N.D.
4-ChlorophenylPhenyl Ether	200	N.D.
Diethylphthalate	400	N.D.
4-Nitroaniline	2000	N.D.
4,6-Dinitro-2-Methylphenol	2000	N.D.
N-Nitrosodiphenylamine	200	N.D.
Azobenzene	200	N.D.
4-BromophenylPhenyl Ether	200	N.D.
Hexachlorobenzene	200	N.D.
Pentachlorophenol	800	N.D.
Phenanthrene	200	900
Anthracene	200	160
Di-n-Butyl Phthalate	400	N.D.
Fluoranthene	200	1900
Pyrene	200	1600
Butylbenzylphthalate	400	N.D.
Benzo[a]anthracene	200	750
Chrysene	200	630
3,3-Dichlorobenzadine	2000	N.D.
Bis(2-ethylhexyl)Phthalate	400	N.D.
Benzo[b]fluoranthene	200	550
Benzo[k]fluoranthene	200	550
Di-n-Octylphthalate	200	N.D.
Benzo[a]pyrene	200	500
Indeno[1,2,3,cd]anthracene	200	380
Dibenz[a,h]anthracene	200	N.D.
Benzo[g,h,i]perylene	200	250

*Cumene isomers	200	N.D.
*C-4 alkylBenzene isomers	200	N.D.
*1-Methylnaphthalene	200	N.D.
*Dimethylnaphthalene isomer	200	N.D.
*Trimethylnaphthalene isome	200	N.D.

GC/MS also detected traces of polynuclear aromatics not listed above.
also several alkanes.

* These are estimated using the response factors of
xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	50 %
Phenol-D6	72 %
Nitrobenzene-D5	70 %
2-Fluorobiphenyl	84 %
2,3,6-Tribromophenol	104 %
4-Terphenyl-D14	136 %

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58638
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 15,1990
DATE RUN	November 28,1990
DILUTION FACTOR	75.0
SAMPLE SITE	SD-4 13.7 grams
PERCENT MOISTURE	19%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	375	N.D.
Aniline	375	N.D.
Phenol	375	N.D.
Bis(2-Chloroethyl)Ether	375	N.D.
2-Chlorophenol	750	N.D.
1,3-Dichlorobenzene	375	N.D.
1,4-Dichlorobenzene	375	N.D.
1,2-Dichlorobenzene	375	N.D.
Benzylalcohol	750	N.D.
2-Methylphenol	375	N.D.
Bis(2-Chloroisopropyl)Ether	375	N.D.
Hexachloroethane	375	N.D.
4-Methylphenol	375	N.D.
N-Nitroso-Di-n-Propylamine	375	N.D.
Nitrobenzene	375	N.D.
Isophorone	375	N.D.
2-Nitrophenol	750	N.D.
2,4-Dimethylphenol	375	N.D.
Bis(2-Chloroethoxy)Methane	375	N.D.
2,4-Dichlorophenol	750	N.D.
1,2,4-Trichlorobenzene	375	N.D.
Naphthalene	375	N.D.
Benzoic Acid	3750	N.D.
4-Chloroaniline	375	N.D.
Hexachlorobutadiene	375	N.D.
4-Chloro-3-Methylphenol	750	N.D.
2-Methylnaphthalene	375	N.D.
Hexachlorocyclopentadiene	375	N.D.
2,4,6-Trichlorophenol	750	N.D.
2,4,5-Trichlorophenol	750	N.D.
2-Chloronaphthlene	375	N.D.
2-Nitroaniline	1500	N.D.
Acenaphthylene	375	N.D.
Dimethylphthalate	750	N.D.
2,6-Dinitrotoluene	750	N.D.
Acenaphthene	375	N.D.
3-Nitroaniline	3750	N.D.
2,4-Dinitrophenol	3750	N.D.
Dibenzofuran	375	N.D.

2,4-Dinitrotoluene	750	N.D.
4-Nitrophenol	3750	N.D.
Fluorene	375	N.D.
4-ChlorophenylPhenyl Ether	375	N.D.
Diethylphthalate	750	N.D.
4-Nitroaniline	3750	N.D.
4,6-Dinitro-2-Methylphenol	3750	N.D.
N-Nitrosodiphenylamine	375	N.D.
Azobenzene	375	N.D.
4-BromophenylPhenyl Ether	375	N.D.
Hexachlorobenzene	375	N.D.
Pentachlorophenol	1500	N.D.
Phenanthrene	375	N.D.
Anthracene	375	N.D.
Di-n-Butyl Phthalate	750	N.D.
Fluoranthene	375	N.D.
Pyrene	375	N.D.
Butylbenzylphthalate	750	N.D.
Benzo[a]anthracene	375	N.D.
Chrysene	375	N.D.
3,3-Dichlorobenzadine	3750	N.D.
Bis(2-ethylhexyl)Phthalate	750	N.D.
Benzo[b]fluoranthene	375	N.D.
Benzo[k]fluoranthene	375	N.D.
Di-n-Octylphthalate	375	N.D.
Benzo[a]pyrene	375	N.D.
Indeno[1,2,3,cd]anthracene	375	N.D.
Dibenz[a,h]anthracene	375	N.D.
Benzo[g,h,i]perylene	375	N.D.
*Cumene isomers	375	N.D.
*C-4 alkylBenzene isomers	375	N.D.
*1-Methylnaphthalene	375	N.D.
*Dimethylnaphthalene isomer	375	N.D.
*Trimethylnaphthalene isome	375	N.D.

* These are estimated using the response factors of
xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	45 %
Phenol-D6	52 %
Nitrobenzene-D5	42 %
2-Fluorobiphenyl	48 %
2,3,6-Tribromophenol	75 %
4-Terphenyl-D14	128 %

DEC 13 1990

VERMONT DEC LABORATORY Waterbury Vermont
METHOD 8270 SEMIVOLATILE ORGANICS in SOIL GC/MS

SAMPLE NUMBER	58639
DATE COLLECTED	November 8,1990
DATE EXTRACTED	November 15,1990
DATE RUN	November 28,1990
DILUTION FACTOR	50.0
SAMPLE SITE	SD-4S 18.5 grams
PERCENT MOISTURE	57%

	Approximate Detection limit ug/Kg	detected ug/Kg
N-Nitrosodimethylamine	250	N.D.
Aniline	250	N.D.
Phenol	250	N.D.
Bis(2-Chloroethyl)Ether	250	N.D.
2-Chlorophenol	500	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
1,2-Dichlorobenzene	250	N.D.
Benzylalcohol	500	N.D.
2-Methylphenol	250	N.D.
Bis(2-Chloroisopropyl)Ether	250	N.D.
Hexachloroethane	250	N.D.
4-Methylphenol	250	N.D.
N-Nitroso-Di-n-Propylamine	250	N.D.
Nitrobenzene	250	N.D.
Isophorone	250	N.D.
2-Nitrophenol	500	N.D.
2,4-Dimethylphenol	250	N.D.
Bis(2-Chloroethoxy)Methane	250	N.D.
2,4-Dichlorophenol	500	N.D.
1,2,4-Trichlorobenzene	250	N.D.
Naphthalene	250	N.D.
Benzoic Acid	2500	N.D.
4-Chloroaniline	250	N.D.
Hexachlorobutadiene	250	N.D.
4-Chloro-3-Methylphenol	500	N.D.
2-Methylnaphthalene	250	N.D.
Hexachlorocyclopentadiene	250	N.D.
2,4,6-Trichlorophenol	500	N.D.
2,4,5-Trichlorophenol	500	N.D.
2-Chloronaphthlene	250	N.D.
2-Nitroaniline	1000	N.D.
Acenaphthylene	250	N.D.
Dimethylphthalate	500	N.D.
2,6-Dinitrotoluene	500	N.D.
Acenaphthene	250	N.D.
3-Nitroaniline	2500	N.D.
2,4-Dinitrophenol	2500	N.D.
Dibenzofuran	250	N.D.

2,4-Dinitrotoluene	500	N.D.
4-Nitrophenol	2500	N.D.
Fluorene	250	N.D.
4-ChlorophenylPhenyl Ether	250	N.D.
Diethylphthalate	500	N.D.
4-Nitroaniline	2500	N.D.
4,6-Dinitro-2-Methylphenol	2500	N.D.
N-Nitrosodiphenylamine	250	N.D.
Azobenzene	250	N.D.
4-BromophenylPhenyl Ether	250	N.D.
Hexachlorobenzene	250	N.D.
Pentachlorophenol	1000	N.D.
Phenanthrene	250	100
Anthracene	250	N.D.
Di-n-Butyl Phthalate	500	N.D.
Fluoranthene	250	200
Pyrene	250	200
Butylbenzylphthalate	500	N.D.
Benzo[a]anthracene	250	100
Chrysene	250	100
3,3-Dichlorobenzadine	2500	N.D.
Bis(2-ethylhexyl)Phthalate	500	N.D.
Benzo[b]fluoranthene	250	100
Benzo[k]fluoranthene	250	100
Di-n-Octylphthalate	250	N.D.
Benzo[a]pyrene	250	N.D.
Indeno[1,2,3,cd]anthracene	250	N.D.
Dibenz[a,h]anthracene	250	N.D.
Benzo[g,h,i]perylene	250	N.D.

*Cumene isomers	250	N.D.
*C-4 alkylBenzene isomers	250	N.D.
*1-Methylnaphthalene	250	N.D.
*Dimethylnaphthalene isomer	250	N.D.
*Trimethylnaphthalene isome	250	N.D.

* These are estimated using the response factors of
xylene and 2-methylnaphthalene

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SURROGATE PERCENT RECOVERY

Fluorophenol	64 %
Phenol-D6	73 %
Nitrobenzene-D5	37 %
2-Fluorobiphenyl	48 %
2,3,6-Tribromophenol	72 %
4-Terphenyl-D14	72 %

Old Montpelier Stump Dump
Site Investigation
Laboratory Analysis Reports
Surface water-Metals

FINAL LAB REPORT

DATE 12/19/90

LAB ID 58640 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SW-1 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
DCU	COPPER DISSOLVED		22	UG/L		12/10/90
DCR	CHROMIUM DISSOLVED	<	10	UG/L		12/11/90
DCD	CADMIUM DISSOLVED	<	2	UG/L		12/10/90
DPB	LEAD DISSOLVED	<	10	UG/L		12/11/90
DNI	NICKEL DISSOLVED		11	UG/L		12/11/90
DZN	ZINC DISSOLVED		666	UG/L		12/11/90
DHG	MERCURY DISSOLVED	<	0.2	UG/L		12/14/90
DAS2	ARSENIC DISS - FURNACE	<	5	UG/L		12/04/90
DSE2	SELENIUM DISS - FURNACE	<	5	UG/L		12/04/90
824W	METHOD 8240 TESTS, WATER		0	NONE	Z	11/16/90

DEC 18 1990

DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 12/13/90

LAB ID 58641 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SW-2 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
DCU	COPPER DISSOLVED	<	10	UG/L		12/10/90
DCR	CHROMIUM DISSOLVED	<	10	UG/L		12/11/90
DCD	CADMIUM DISSOLVED	<	2	UG/L		12/10/90
DPB	LEAD DISSOLVED	<	10	UG/L		12/11/90
DNI	NICKEL DISSOLVED	<	10	UG/L		12/11/90
DZN	ZINC DISSOLVED	<	40	UG/L		12/11/90
DHG	MERCURY DISSOLVED	<	0.2	UG/L		12/07/90
DAS2	ARSENIC DISS - FURNACE	<	5	UG/L		12/04/90
DSE2	SELENIUM DISS - FURNACE	<	5	UG/L		12/04/90
824W	METHOD 8240 TESTS, WATER		0	NONE	Z	11/16/90

FINAL LAB REPORT

DATE 12/13/90

LAB ID 58642 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SW-3 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
DCU	COPPER DISSOLVED		23	UG/L		12/10/90
DCR	CHROMIUM DISSOLVED	<	10	UG/L		12/11/90
DCD	CADMIUM DISSOLVED	<	2	UG/L		12/10/90
DPB	LEAD DISSOLVED	<	10	UG/L		12/11/90
DNI	NICKEL DISSOLVED		12	UG/L		12/11/90
DZN	ZINC DISSOLVED		44	UG/L		12/11/90
DHG	MERCURY DISSOLVED	<	0.2	UG/L		12/07/90
DAS2	ARSENIC DISS - FURNACE	<	5	UG/L		12/04/90
DSE2	SELENIUM DISS - FURNACE	<	5	UG/L		12/04/90
824W	METHOD 8240 TESTS, WATER		0	NONE	Z	11/16/90

FINAL LAB REPORT

DATE 12/13/90

LAB ID 58643 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION SW-4 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
DCU	COPPER DISSOLVED		17	UG/L		12/10/90
DCR	CHROMIUM DISSOLVED	<	10	UG/L		12/11/90
DCD	CADMIUM DISSOLVED	<	2	UG/L		12/10/90
DPB	LEAD DISSOLVED	<	10	UG/L		12/11/90
DNI	NICKEL DISSOLVED	<	10	UG/L		12/11/90
DZN	ZINC DISSOLVED	<	40	UG/L		12/11/90
DHG	MERCURY DISSOLVED	<	0.2	UG/L		12/07/90
DAS2	ARSENIC DISS - FURNACE	<	5	UG/L		12/04/90
DSE2	SELENIUM DISS - FURNACE	<	5	UG/L		12/04/90
824W	METHOD 8240 TESTS, WATER		0	NONE	Z	11/16/90

Old Montpelier Stump Dump
Site Investigation
Laboratory Analysis Reports
Surface water-VOC's

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY

DEC 03 1990

DATA SHEET FOR VOLATILE ORGANICS - **WATER**

SAMPLE NUMBER: 58640 ANALYST: SRL REMARKS CODE 824W: Z

DATE RUN: 11-16-90 DILUTION FACTOR: 1

SITE: SW-1

DATE COLLECTED: 11-07-90

		Approximate Detection Limit ug/l	Detected at ug/l
VW07	Vinyl chloride	10	ND
VW08	Chloromethane	10	ND
VW09	Bromomethane	10	ND
VW10	Chloroethane	10	ND
VW11	Trichlorofluoromethane	10	ND
VW12	Acetone	50	ND
VW13	1,1-Dichloroethene	2	ND
VW14	Carbon disulfide	2	ND
VW15	Methylene chloride	2	ND
VW16	Methyl-t-Butylether (MTBE)	10	ND
VW17	1,2-Dichloroethene	2	ND
VW18	1,1-Dichloroethane	2	ND
VW19	Vinyl acetate	50	ND
VW20	2-Butanone	50	ND
VW21	Chloroform	2	ND
VW22	1,1,1-Trichloroethane	2	ND
VW23	Carbon tetrachloride	2	ND
VW24	Benzene	2	ND
VW25	1,2-Dichloroethane	2	ND
VW26	Trichloroethene	2	ND
VW27	1,2-Dichloropropane	2	ND
VW28	Bromodichloromethane	2	ND
VW29	4-Methyl-2-pentanone	20	ND
VW30	cis-1,3-Dichloropropene	2	ND
VW31	Toluene	2	ND
VW32	trans-1,3-Dichloropropene	2	ND
VW33	1,1,2-Trichloroethane	2	ND
VW34	2-Hexanone	20	ND
VW35	Tetrachloroethene	2	ND
VW36	Dibromochloromethane	2	ND
VW37	Chlorobenzene	2	ND
VW38	Ethylbenzene	2	ND
VW39	Xylenes	2	ND
VW40	Styrene	2	ND
VW41	Bromoform	2	ND
VW42	1,1,2,2,-Tetrachloroethane	2	ND
TVH	Total Volatile Hydrocarbons	100	ND

REMARKS.....

SURROGATE RECOVERIES.....

1,2-Dichloroethane - D4: 107% D8-Toluene: 120% 4-BromoFluorobenzene: 113%

GD\VW01

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY

DEC 03 1990

DATA SHEET FOR VOLATILE ORGANICS - **WATER**

SAMPLE NUMBER: 58641 ANALYST: SRL REMARKS CODE 824W: Z

DATE RUN: 11-16-90 DILUTION FACTOR: 1

SITE: SW-2

DATE COLLECTED: 11-07-90

		Approximate Detection Limit ug/l	Detected at ug/l
VW07	Vinyl chloride	10	ND
VW08	Chloromethane	10	ND
VW09	Bromomethane	10	ND
VW10	Chloroethane	10	ND
VW11	Trichlorofluoromethane	10	ND
VW12	Acetone	50	ND
VW13	1,1-Dichloroethene	2	ND
VW14	Carbon disulfide	2	ND
VW15	Methylene chloride	2	ND
VW16	Methyl-t-Butylether (MTBE)	10	ND
VW17	1,2-Dichloroethene	2	ND
VW18	1,1-Dichloroethane	2	ND
VW19	Vinyl acetate	50	ND
VW20	2-Butanone	50	ND
VW21	Chloroform	2	ND
VW22	1,1,1-Trichloroethane	2	ND
VW23	Carbon tetrachloride	2	ND
VW24	Benzene	2	ND
VW25	1,2-Dichloroethane	2	ND
VW26	Trichloroethene	2	ND
VW27	1,2-Dichloropropane	2	ND
VW28	Bromodichloromethane	2	ND
VW29	4-Methyl-2-pentanone	20	ND
VW30	cis-1,3-Dichloropropene	2	ND
VW31	Toluene	2	ND
VW32	trans-1,3-Dichloropropene	2	ND
VW33	1,1,2-Trichloroethane	2	ND
VW34	2-Hexanone	20	ND
VW35	Tetrachloroethene	2	ND
VW36	Dibromochloromethane	2	ND
VW37	Chlorobenzene	2	ND
VW38	Ethylbenzene	2	ND
VW39	Xylenes	2	ND
VW40	Styrene	2	ND
VW41	Bromoform	2	ND
VW42	1,1,2,2,-Tetrachloroethane	2	ND
TVH	Total Volatile Hydrocarbons	100	ND

REMARKS.....

SURROGATE RECOVERIES.....

1,2-Dichloroethane - D4: 107% D8-Toluene: 107% 4-BromoFluorobenzene: 103%

GD\VW01

DEC 03 1990

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR VOLATILE ORGANICS - **WATER**

SAMPLE NUMBER: 58642 ANALYST: SRL REMARKS CODE 824W: Z
DATE RUN: 11-16-90 DILUTION FACTOR: 1
SITE: SW-3
DATE COLLECTED: 11-07-90

		Approximate Detection Limit ug/l	Detected at ug/l
VW07	Vinyl chloride	10	ND
VW08	Chloromethane	10	ND
VW09	Bromomethane	10	ND
VW10	Chloroethane	10	ND
VW11	Trichlorofluoromethane	10	ND
VW12	Acetone	50	ND
VW13	1,1-Dichloroethene	2	ND
VW14	Carbon disulfide	2	ND
VW15	Methylene chloride	2	ND
VW16	Methyl-t-Butylether (MTBE)	10	ND
VW17	1,2-Dichloroethene	2	ND
VW18	1,1-Dichloroethane	2	ND
VW19	Vinyl acetate	50	ND
VW20	2-Butanone	50	ND
VW21	Chloroform	2	ND
VW22	1,1,1-Trichloroethane	2	ND
VW23	Carbon tetrachloride	2	ND
VW24	Benzene	2	ND
VW25	1,2-Dichloroethane	2	ND
VW26	Trichloroethene	2	ND
VW27	1,2-Dichloropropane	2	ND
VW28	Bromodichloromethane	2	ND
VW29	4-Methyl-2-pentanone	20	ND
VW30	cis-1,3-Dichloropropene	2	ND
VW31	Toluene	2	ND
VW32	trans-1,3-Dichloropropene	2	ND
VW33	1,1,2-Trichloroethane	2	ND
VW34	2-Hexanone	20	ND
VW35	Tetrachloroethene	2	ND
VW36	Dibromochloromethane	2	ND
VW37	Chlorobenzene	2	ND
VW38	Ethylbenzene	2	ND
VW39	Xylenes	2	ND
VW40	Styrene	2	ND
VW41	Bromoform	2	ND
VW42	1,1,2,2,-Tetrachloroethane	2	ND
TVH	Total Volatile Hydrocarbons	100	ND

REMARKS.....

SURROGATE RECOVERIES.....
1,2-Dichloroethane - D4: 103% D8-Toluene: 103% 4-BromoFluorobenzene: 103%

GD\VW01

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR VOLATILE ORGANICS - **WATER**

SAMPLE NUMBER: 58643 ANALYST: SRL REMARKS CODE 824W: Z
DATE RUN: 11-07-90 DILUTION FACTOR: 1
SITE: SW-4
DATE COLLECTED: 11-07-90

		Approximate Detection Limit ug/l	Detected at ug/l
VW07	Vinyl chloride	10	ND
VW08	Chloromethane	10	ND
VW09	Bromomethane	10	ND
VW10	Chloroethane	10	ND
VW11	Trichlorofluoromethane	10	ND
VW12	Acetone	50	ND
VW13	1,1-Dichloroethene	2	ND
VW14	Carbon disulfide	2	ND
VW15	Methylene chloride	2	ND
VW16	Methyl-t-Butylether (MTBE)	10	ND
VW17	1,2-Dichloroethene	2	ND
VW18	1,1-Dichloroethane	2	ND
VW19	Vinyl acetate	50	ND
VW20	2-Butanone	50	ND
VW21	Chloroform	2	ND
VW22	1,1,1-Trichloroethane	2	ND
VW23	Carbon tetrachloride	2	ND
VW24	Benzene	2	ND
VW25	1,2-Dichloroethane	2	ND
VW26	Trichloroethene	2	ND
VW27	1,2-Dichloropropane	2	ND
VW28	Bromodichloromethane	2	ND
VW29	4-Methyl-2-pentanone	20	ND
VW30	cis-1,3-Dichloropropene	2	ND
VW31	Toluene	2	ND
VW32	trans-1,3-Dichloropropene	2	ND
VW33	1,1,2-Trichloroethane	2	ND
VW34	2-Hexanone	20	ND
VW35	Tetrachloroethene	2	ND
VW36	Dibromochloromethane	2	ND
VW37	Chlorobenzene	2	ND
VW38	Ethylbenzene	2	ND
VW39	Xylenes	2	ND
VW40	Styrene	2	ND
VW41	Bromoform	2	ND
VW42	1,1,2,2,-Tetrachloroethane	2	ND
TVH	Total Volatile Hydrocarbons	100	ND

REMARKS.....

SURROGATE RECOVERIES.....
1,2-Dichloroethane - D4: 100% D8-Toluene: 110% 4-BromoFluorobenzene: 103%

GD\VW01

Old Montpelier Stump Dump
Site Investigation
Laboratory Analysis Reports
Groundwater-Metals

DEC 18 1990

DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 12/13/90

LAB ID 58644 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION GW-1 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
DCU	COPPER DISSOLVED	<	10	UG/L		12/10/90
DCR	CHROMIUM DISSOLVED	<	10	UG/L		12/11/90
DCD	CADMIUM DISSOLVED	<	2	UG/L		12/10/90
DPB	LEAD DISSOLVED	<	10	UG/L		12/11/90
DNI	NICKEL DISSOLVED	<	10	UG/L		12/11/90
DZN	ZINC DISSOLVED	<	40	UG/L		12/11/90
DHG	MERCURY DISSOLVED	<	0.2	UG/L		12/07/90
DAS2	ARSENIC DISS - FURNACE	<	5	UG/L		12/04/90
DSE2	SELENIUM DISS - FURNACE	<	5	UG/L		12/04/90
824W	METHOD 8240 TESTS, WATER		0	NONE	Z	11/16/90

FINAL LAB REPORT

DATE 12/13/90

LAB ID 58645 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION GW-2 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME	RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
DCU	COPPER DISSOLVED	< 10	UG/L		12/10/90
DCR	CHROMIUM DISSOLVED	< 10	UG/L		12/11/90
DCD	CADMIUM DISSOLVED	< 2	UG/L		12/10/90
DPB	LEAD DISSOLVED	< 10	UG/L		12/11/90
DNI	NICKEL DISSOLVED	11	UG/L		12/11/90
DZN	ZINC DISSOLVED	< 40	UG/L		12/11/90
DHG	MERCURY DISSOLVED	< 0.2	UG/L		12/07/90
DAS2	ARSENIC DISS - FURNACE	< 5	UG/L		12/04/90
DSE2	SELENIUM DISS - FURNACE	< 5	UG/L		12/04/90
824W	METHOD 8240 TESTS, WATER	0	NONE	Z	11/16/90

DEPT. OF ENVIRONMENTAL CONSERVATION LAB MANAGEMENT SYSTEM PAGE 1

FINAL LAB REPORT

DATE 12/21/90

LAB ID 58646 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION GW-3 COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME		RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
DCU	COPPER DISSOLVED	<	10	UG/L		12/10/90
DCR	CHROMIUM DISSOLVED	<	10	UG/L		12/11/90
DCD	CADMIUM DISSOLVED	<	2	UG/L		12/10/90
DPB	LEAD DISSOLVED	<	10	UG/L		12/11/90
DNI	NICKEL DISSOLVED	<	10	UG/L		12/11/90
DZN	ZINC DISSOLVED	<	40	UG/L		12/11/90
DHG	MERCURY DISSOLVED	<	0.2	UG/L		12/07/90
DAS2	ARSENIC DISS - FURNACE	<	5	UG/L		12/05/90
DSE2	SELENIUM DISS - FURNACE	<	5	UG/L		12/04/90
824W	METHOD 8240 TESTS, WATER		0	NONE	Z	11/16/90

FINAL LAB REPORT

DATE 12/13/90

LAB ID 58657 REPORT TO L/GUERE DUE DATE 12/08/90

SOURCE LOCATION FILTER BLANK COLLECTION DATE 11/07/90

PROGRAM 021-MULTI-SITE COOP AGREEMENT (PREREMEDIAL) AMBIENT WATER SAMPLE N

SUBMITTED BY L/GUERE PHONE 244-8702 SUBMIT DATE 11/08/90 LEGAL YES

SAMPLE NOTES:

TEST CODE	TEST NAME	RESULT	UNIT OF MEASURE	REMARKS CODE	PROCESS DATE
DCU	COPPER DISSOLVED	< 10	UG/L		12/10/90
DCR	CHROMIUM DISSOLVED	< 10	UG/L		12/11/90
DCD	CADMIUM DISSOLVED	< 2	UG/L		12/10/90
DPB	LEAD DISSOLVED	< 10	UG/L		12/11/90
DNI	NICKEL DISSOLVED	< 10	UG/L		12/11/90
DZN	ZINC DISSOLVED	< 40	UG/L		12/11/90

Old Montpelier Stump Dump
Site Investigation
Laboratory Analysis Reports
Groundwater-VOC's

DEC 03 1990

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR VOLATILE ORGANICS - **WATER**

SAMPLE NUMBER: 58644 ANALYST: SRL REMARKS CODE 824W: Z
DATE RUN: 11-16-90 DILUTION FACTOR: 1
SITE: GW-1
DATE COLLECTED: 11-07-90

		Approximate Detection Limit ug/l	Detected at ug/l
VW07	Vinyl chloride	10	ND
VW08	Chloromethane	10	ND
VW09	Bromomethane	10	ND
VW10	Chloroethane	10	ND
VW11	Trichlorofluoromethane	10	ND
VW12	Acetone	50	ND
VW13	1,1-Dichloroethene	2	ND
VW14	Carbon disulfide	2	ND
VW15	Methylene chloride	2	ND
VW16	Methyl-t-Butylether (MTBE)	10	ND
VW17	1,2-Dichloroethene	2	ND
VW18	1,1-Dichloroethane	2	ND
VW19	Vinyl acetate	50	ND
VW20	2-Butanone	50	ND
VW21	Chloroform	2	ND
VW22	1,1,1-Trichloroethane	2	ND
VW23	Carbon tetrachloride	2	ND
VW24	Benzene	2	ND
VW25	1,2-Dichloroethane	2	ND
VW26	Trichloroethene	2	ND
VW27	1,2-Dichloropropane	2	ND
VW28	Bromodichloromethane	2	ND
VW29	4-Methyl-2-pentanone	20	ND
VW30	cis-1,3-Dichloropropene	2	ND
VW31	Toluene	2	ND
VW32	trans-1,3-Dichloropropene	2	ND
VW33	1,1,2-Trichloroethane	2	ND
VW34	2-Hexanone	20	ND
VW35	Tetrachloroethene	2	ND
VW36	Dibromochloromethane	2	ND
VW37	Chlorobenzene	2	ND
VW38	Ethylbenzene	2	ND
VW39	Xylenes	2	ND
VW40	Styrene	2	ND
VW41	Bromoform	2	ND
VW42	1,1,2,2,-Tetrachloroethane	2	ND
TVH	Total Volatile Hydrocarbons	100	ND

REMARKS.....

SURROGATE RECOVERIES.....
1,2-Dichloroethane - D4: 100% D8-Toluene: 97% 4-BromoFluorobenzene: 100%

GD\VW01

DEC 03 1990

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR VOLATILE ORGANICS - **WATER**

SAMPLE NUMBER: 58645 ANALYST: SRL REMARKS CODE 824W: Z
DATE RUN: 11-16-90 DILUTION FACTOR: 1
SITE: GW-2
DATE COLLECTED: 11-07-90

		Approximate Detection Limit ug/l	Detected at ug/l
VW07	Vinyl chloride	10	ND
VW08	Chloromethane	10	ND
VW09	Bromomethane	10	ND
VW10	Chloroethane	10	ND
VW11	Trichlorofluoromethane	10	ND
VW12	Acetone	50	ND
VW13	1,1-Dichloroethene	2	ND
VW14	Carbon disulfide	2	ND
VW15	Methylene chloride	2	ND
VW16	Methyl-t-Butylether (MTBE)	10	ND
VW17	1,2-Dichloroethene	2	ND
VW18	1,1-Dichloroethane	2	ND
VW19	Vinyl acetate	50	ND
VW20	2-Butanone	50	ND
VW21	Chloroform	2	ND
VW22	1,1,1-Trichloroethane	2	ND
VW23	Carbon tetrachloride	2	ND
VW24	Benzene	2	ND
VW25	1,2-Dichloroethane	2	ND
VW26	Trichloroethene	2	ND
VW27	1,2-Dichloropropane	2	ND
VW28	Bromodichloromethane	2	ND
VW29	4-Methyl-2-pentanone	20	ND
VW30	cis-1,3-Dichloropropene	2	ND
VW31	Toluene	2	ND
VW32	trans-1,3-Dichloropropene	2	ND
VW33	1,1,2-Trichloroethane	2	ND
VW34	2-Hexanone	20	ND
VW35	Tetrachloroethene	2	ND
VW36	Dibromochloromethane	2	ND
VW37	Chlorobenzene	2	ND
VW38	Ethylbenzene	2	ND
VW39	Xylenes	2	ND
VW40	Styrene	2	ND
VW41	Bromoform	2	ND
VW42	1,1,2,2,-Tetrachloroethane	2	ND
TVH	Total Volatile Hydrocarbons	100	ND

REMARKS.....

SURROGATE RECOVERIES.....
1,2-Dichloroethane - D4: 100% D8-Toluene: 93% 4-BromoFluorobenzene: 97%

GD\VW01

DEC 03 1990

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR VOLATILE ORGANICS - **WATER**

SAMPLE NUMBER: 58646 ANALYST: SRL REMARKS CODE 824W: Z
DATE RUN: 11-07-90 DILUTION FACTOR: 1
SITE: GW-3
DATE COLLECTED: 11-07-90

		Approximate Detection Limit ug/l	Detected at ug/l
VW07	Vinyl chloride	10	ND
VW08	Chloromethane	10	ND
VW09	Bromomethane	10	ND
VW10	Chloroethane	10	ND
VW11	Trichlorofluoromethane	10	ND
VW12	Acetone	50	ND
VW13	1,1-Dichloroethene	2	ND
VW14	Carbon disulfide	2	ND
VW15	Methylene chloride	2	ND
VW16	Methyl-t-Butylether (MTBE)	10	ND
VW17	1,2-Dichloroethene	2	ND
VW18	1,1-Dichloroethane	2	ND
VW19	Vinyl acetate	50	ND
VW20	2-Butanone	50	ND
VW21	Chloroform	2	ND
VW22	1,1,1-Trichloroethane	2	ND
VW23	Carbon tetrachloride	2	ND
VW24	Benzene	2	ND
VW25	1,2-Dichloroethane	2	ND
VW26	Trichloroethene	2	ND
VW27	1,2-Dichloropropane	2	ND
VW28	Bromodichloromethane	2	ND
VW29	4-Methyl-2-pentanone	20	ND
VW30	cis-1,3-Dichloropropene	2	ND
VW31	Toluene	2	ND
VW32	trans-1,3-Dichloropropene	2	ND
VW33	1,1,2-Trichloroethane	2	ND
VW34	2-Hexanone	20	ND
VW35	Tetrachloroethene	2	ND
VW36	Dibromochloromethane	2	ND
VW37	Chlorobenzene	2	ND
VW38	Ethylbenzene	2	ND
VW39	Xylenes	2	ND
VW40	Styrene	2	ND
VW41	Bromoform	2	ND
VW42	1,1,2,2,-Tetrachloroethane	2	ND
TVH	Total Volatile Hydrocarbons	100	ND

REMARKS.....

SURROGATE RECOVERIES.....
1,2-Dichloroethane - D4: 100% D8-Toluene: 93% 4-BromoFluorobenzene: 97%

GD\VW01

DEC 03 1990

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR VOLATILE ORGANICS - **WATER**

SAMPLE NUMBER: 58658 ANALYST: SRL REMARKS CODE 824W: Z
DATE RUN: 11-16-90 DILUTION FACTOR: 1
SITE: TB
DATE COLLECTED: 11-07-90

		Approximate Detection Limit ug/l	Detected at ug/l
VW07	Vinyl chloride	10	ND
VW08	Chloromethane	10	ND
VW09	Bromomethane	10	ND
VW10	Chloroethane	10	ND
VW11	Trichlorofluoromethane	10	ND
VW12	Acetone	50	ND
VW13	1,1-Dichloroethene	2	ND
VW14	Carbon disulfide	2	ND
VW15	Methylene chloride	2	ND
VW16	Methyl-t-Butylether (MTBE)	10	ND
VW17	1,2-Dichloroethene	2	ND
VW18	1,1-Dichloroethane	2	ND
VW19	Vinyl acetate	50	ND
VW20	2-Butanone	50	ND
VW21	Chloroform	2	ND
VW22	1,1,1-Trichloroethane	2	ND
VW23	Carbon tetrachloride	2	ND
VW24	Benzene	2	ND
VW25	1,2-Dichloroethane	2	ND
VW26	Trichloroethene	2	ND
VW27	1,2-Dichloropropane	2	ND
VW28	Bromodichloromethane	2	ND
VW29	4-Methyl-2-pentanone	20	ND
VW30	cis-1,3-Dichloropropene	2	ND
VW31	Toluene	2	ND
VW32	trans-1,3-Dichloropropene	2	ND
VW33	1,1,2-Trichloroethane	2	ND
VW34	2-Hexanone	20	ND
VW35	Tetrachloroethene	2	ND
VW36	Dibromochloromethane	2	ND
VW37	Chlorobenzene	2	ND
VW38	Ethylbenzene	2	ND
VW39	Xylenes	2	ND
VW40	Styrene	2	ND
VW41	Bromoform	2	ND
VW42	1,1,2,2,-Tetrachloroethane	2	ND
TVH	Total Volatile Hydrocarbons	100	ND

REMARKS.....

SURROGATE RECOVERIES.....
1,2-Dichloroethane - D4: 107% D8-Toluene: 97% 4-BromoFluorobenzene: 100%

GD\VW01

DEC 03 1990

VT. DEPT. ENVIRONMENTAL CONSERVATION LABORATORY
DATA SHEET FOR VOLATILE ORGANICS - **WATER**

SAMPLE NUMBER: 58659 ANALYST: SRL REMARKS CODE 824W: Z
DATE RUN: 11-16-90 DILUTION FACTOR: 1
SITE: FB
DATE COLLECTED: 11-07-90

		Approximate Detection Limit ug/l	Detected at ug/l
VW07	Vinyl chloride	10	ND
VW08	Chloromethane	10	ND
VW09	Bromomethane	10	ND
VW10	Chloroethane	10	ND
VW11	Trichlorofluoromethane	10	ND
VW12	Acetone	50	ND
VW13	1,1-Dichloroethene	2	ND
VW14	Carbon disulfide	2	ND
VW15	Methylene chloride	2	ND
VW16	Methyl-t-Butylether (MTBE)	10	ND
VW17	1,2-Dichloroethene	2	ND
VW18	1,1-Dichloroethane	2	ND
VW19	Vinyl acetate	50	ND
VW20	2-Butanone	50	ND
VW21	Chloroform	2	ND
VW22	1,1,1-Trichloroethane	2	ND
VW23	Carbon tetrachloride	2	ND
VW24	Benzene	2	ND
VW25	1,2-Dichloroethane	2	ND
VW26	Trichloroethene	2	ND
VW27	1,2-Dichloropropane	2	ND
VW28	Bromodichloromethane	2	ND
VW29	4-Methyl-2-pentanone	20	ND
VW30	cis-1,3-Dichloropropene	2	ND
VW31	Toluene	2	ND
VW32	trans-1,3-Dichloropropene	2	ND
VW33	1,1,2-Trichloroethane	2	ND
VW34	2-Hexanone	20	ND
VW35	Tetrachloroethene	2	ND
VW36	Dibromochloromethane	2	ND
VW37	Chlorobenzene	2	ND
VW38	Ethylbenzene	2	ND
VW39	Xylenes	2	ND
VW40	Styrene	2	ND
VW41	Bromoform	2	ND
VW42	1,1,2,2,-Tetrachloroethane	2	ND
TVH	Total Volatile Hydrocarbons	100	ND

REMARKS.....

SURROGATE RECOVERIES.....
1,2-Dichloroethane - D4: 100% D8-Toluene: 90% 4-BromoFluorobenzene: 97%

GD\VW01